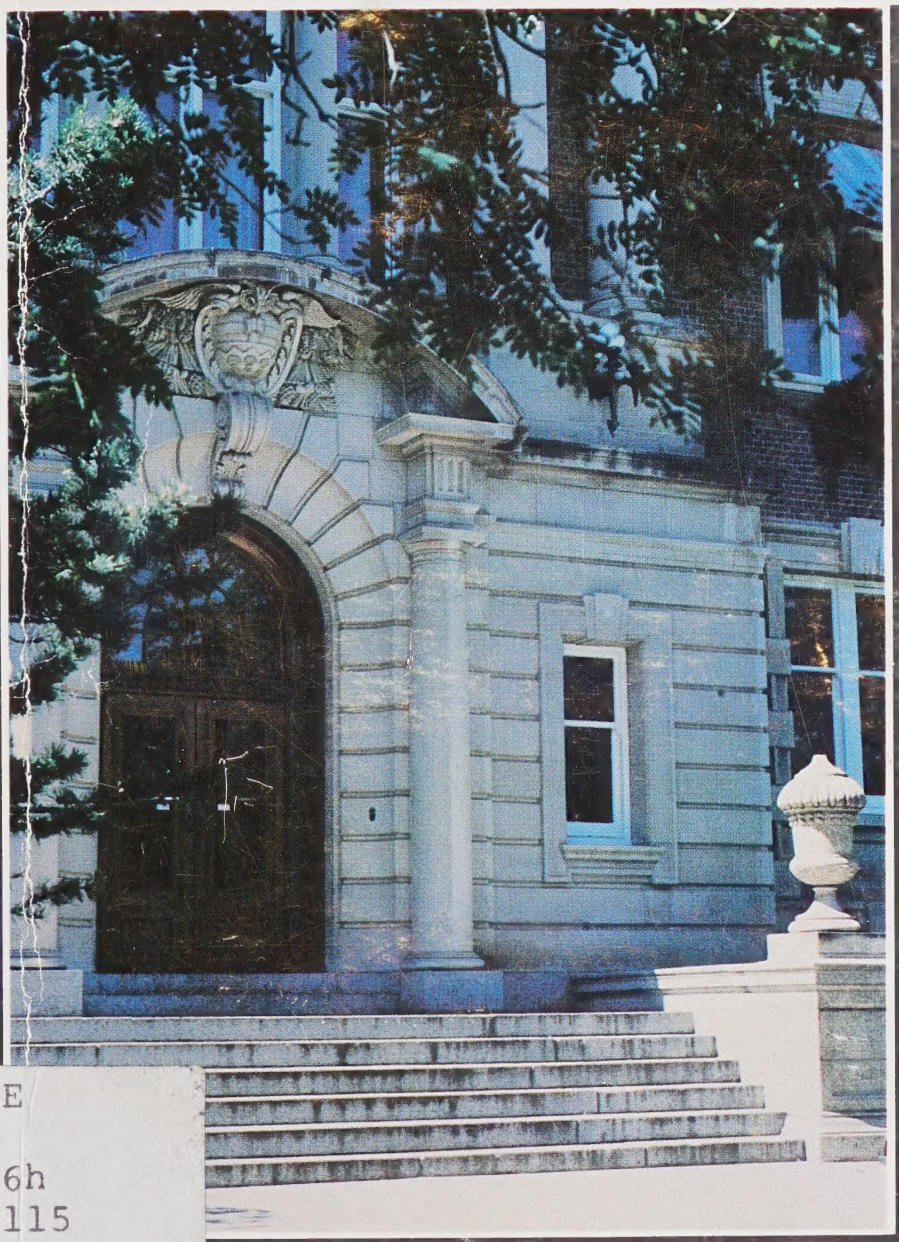


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Development of
Graduate Studies at
The University of
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Arthur G. McCalla

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The Development of Graduate Studies at The University of Alberta

1908-1983

Arthur G. McCalla

The University of Alberta
1983

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1983

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To all those who have contributed toward
the development of Graduate Studies at
The University of Alberta

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Foreword

The growth and development of graduate work at the University of Alberta from 1956 onward must surely be considered one of the great achievements of this institution. From 1911 until 1955 the University conferred a total of 1,163 graduate degrees, all but seven on the master's level. From 1956 until 1982 the University awarded a total of 11,676 graduate degrees, of which 2,753 were Ph.D.'s.

These numbers of course can only be rough indicators of the enormous work that went into the building of the Faculty of Graduate Studies and Research, into assembling here a large number of highly qualified men and women capable of conducting and supervising research at the highest level, and into providing the laboratories, the libraries, and all the other support services that are needed if such research is to be successfully carried out.

It is to the credit of this University that graduate work played a role, albeit a very minor one, from the very beginning of the institution's existence.

Dr. McCalla tells a fascinating story of the first tentative steps into the world of advanced scholarship in the chapter on "The Early Years, 1908-1925." The University was certainly very much aware of its responsibilities. "A striking feature of many of these early programs," he writes, "was the requirement . . . that the program be discussed not only with the department concerned but also with President Tory," and he tells us

that when, in 1912, a candidate applied for admission to an M.A. program in History and English, the minutes of the Faculty of Arts and Science recorded that “the details of the course (are) to be arranged in consultation with President Tory and Professor Broadus.”

This may seem quaint to us today, but it does indicate that the University did not grant graduate degrees lightly. Indeed, many of the early recipients of master’s degrees went on to distinguished careers in the public life of this province and this country.

But it is certainly true, as Dr. McCalla writes in his summary, that in the early years of its existence, “the University of Alberta concentrated on developing sound undergraduate programs. Graduate work at the master’s level was instituted in these years, but the records show clearly that such work was considered incidental to the main thrust of the University.”

The Great Depression and the Second World War certainly were not conducive to the development of advanced work, and it was not until after the war and the rapid growth of the student body that there was again a movement towards the development of graduate work. This was reflected in the appointment of a Director of the School of Graduate Studies in 1952. Dr. O. J. Walker filled the post, although it was still only a part-time position.

It was not until 1957, when the School became the Faculty of Graduate Studies and Dr. A. G. McCalla became its first dean, that the great and systematic development of graduate work in all its dimensions began.

And here I should say a few words about the extraordinary man who is properly credited with creating the framework within which the newly-established Faculty of Graduate Studies could develop and prosper.

A. G. McCalla was Dean of Agriculture when President Andrew Stewart asked him to give up the deanship of a highly developed and esteemed faculty and to venture into unknown territory.

It was an inspired choice. For A. G. McCalla was not only a first-rate administrator, he was also a man of great vision. He was a scientist who believed that research and the discovery of new knowledge were essential if Canada was to develop into a strong and important nation and if the country was to play its proper role in the world, but he also believed that scientific and technological education by itself was not enough, and that the humanities, the social sciences, and the fine arts were also needed if Canada was to build a truly civilized society. Graduate education therefore had to

embrace all the disciplines that were properly a part of the modern university.

Ultimately it was his moral and intellectual leadership that distinguished his tenure as the first Dean of the Faculty of Graduate Studies. He cared for people; he fought long and hard for proper support for graduate students; he insisted on the highest standards of performance. The University of Alberta is deeply in his debt. He has left us a great legacy.

Henry Kreisel
University Professor

Preface

In preparing this review of the development of graduate studies at the University of Alberta, I have made use of the records in the Archives of the University and have had the assistance of the Faculty of Graduate Studies and the Student Awards office. The Archive records studied include the minutes of the various administrative bodies responsible for graduate studies, the early minutes of the Senate, some of President Tory's papers, Convocation programs and Calendars. For the period up to 1947 I have been totally dependent on these records. In October 1947 I became a member of the Committee on Graduate Studies and remained actively involved in this work until I retired in 1971. From 1957 until 1971 I was dean of the faculty. It was during this period that the enormous growth of graduate studies took place.

Because of my full-time association with this work I am aware of many things that are not recorded in the minutes or records of the faculty. A few of these things have been reported in this review.

Direct quotations from the Faculty, Senate or other minutes are enclosed with quotation marks.

There may be small errors in the statistical data presented. For these I take full responsibility. It must be noted, however, that such errors might arise for a number of reasons: (a) a student's name appears for the same

degree on two successive early Convocation programs; (b) a very few names have been added to Convocation programs in hand-writing; (c) the totals secured from the faculty office and the Registrar's office differ slightly in a very few cases.

Where the totals do differ, I have gone back to the Convocation programs and find that there appear to be very minor errors in the totals from both offices. They seem to roughly balance out. In any case, no significant harm results because the intent of this review and the magnitude of the numbers involved make any slight error negligible.

I am especially indebted to: President Horowitz for his encouragement to me to undertake this review and for making material assistance available; to the staff of the University Archives including James M. Parker, Gertrude Russell, and Kevan Warner; to the staff in the office of the Faculty of Graduate Studies, including Acting Dean Woods, Associate Dean Gainer, Harold Hawes, and Mari-Ann McCargar; to Larry Henderson of the Student Awards office; and to Dr. Henry Kreisel, who read the manuscript and made useful suggestions.

Introduction

The first graduate degrees conferred by the University of Alberta at the first Convocation, held May 16, 1911, were two Master of Arts degrees to George Fred McNally and Jennie Stark Hill, and three Master of Science degrees to Clarence Arthur Curtis, James Alexander Fife and Ethelbert Lincoln Hill. These degrees were recommended to the University Senate by the Council of the Faculty of Arts and Science and approved immediately before the holding of Convocation. In fact the minutes of the meeting of Senate state that as soon as the degree list had been approved:

Convocation then formed into the Academic procession and marched to the Assembly Hall where degrees were conferred.

Two graduate degrees were conferred at the Convocation held on May 15, 1912: a Master of Arts degree to W. F. Dyde and a Master of Science degree to Decima E. Robinson. These degrees were also recommended to Senate by the Council of the Faculty of Arts and Science.

The first meeting of a committee specifically charged with the administration of Graduate Studies was held November 28, 1912. The official minutes refer to two committees, one "The Committee on M.A. and M.Sc. Degrees" and the other "the Committee on Honours and Graduate Studies."

The former is referred to only a very few times while most decisions are recorded in the minutes of the Committee on Honours and Graduate Studies. The first chairman of this committee was Professor Adolph Lehmann of the Department of Chemistry.

The Administration of Graduate Studies

The Committee on Honours and Graduate Studies administered all matters concerning graduate students and programs until March 1915, when the Committee on Graduate Studies was established. The chairman of this committee was W. A. R. Kerr, the Dean of the Faculty of Arts and Science. It is very difficult to determine the membership of this committee, but it seems likely that most senior members of the academic staff attended meetings at one time or another. The usual attendance was only three or four, occasionally five, staff members but meetings are recorded at which only two were present. This situation gradually changed as the University grew. Throughout the existence of the committee it was chaired by the Dean of Arts and Science. Between 1915 and 1952 there were only three chairmen, W. A. R. Kerr, from 1915 to 1936; G. M. Smith, from 1936 to 1943; John Macdonald, from 1944 to 1952; and one acting chairman, R. K. Gordon, from October 1943 to May 1944.

The first reference to the School of Graduate Studies is in the minutes of the meeting of January 25, 1939. The Dean of Arts and Science was still the chairman of the meetings. The term "Director of the School of Graduate Studies" does not appear to have been used until September 1952, when Dr. O. J. Walker, Head of the Department of Chemistry, was appointed director. At that time the council of the school was made up of representatives of the

faculties, usually two from each of those faculties in which graduate work was carried on.

Dr. Walker reported at the October 16, 1952, meeting of the school council that "the Board of Governors are unwilling at this time, to create a Faculty of Graduate Studies." The director, however, attended the meetings of Deans' Council. Dr. Walker also stated that the membership of the council should be expanded. Some minor changes occurred, but the principle of representation by faculties was retained.

The administration of Graduate Studies was upgraded to faculty status in 1957 when Dr. Walker retired as director of the school. The President, Andrew Stewart, reported that the Board of Governors had decided that the graduate work at the University should be greatly expanded. Work leading to the degree of Doctor of Philosophy had been started in a few departments and many more were requesting permission to offer the advanced degree. Obviously, more adequate administrative procedures were needed. It was agreed that the first step was the creation of a faculty with a full-time dean. The first dean appointed was A. G. McCalla who organized the first full-time office in September 1957. At the same time it was agreed that membership on the council should be one representative from each department in which an appreciable amount of graduate work was being carried on. This meant that the other faculties were not directly represented on the council but it ensured direct communication between departments and the dean's office. The representative of a department was frequently the head of that department but larger departments soon found it advantageous to have "graduate committees" and the chairmen of those committees usually represented the departments on the faculty council.

In the early 1960s, the Administrator of Student Awards became an official member of council and in 1968 the Graduate Students' Association obtained representation, with full voting rights. At first the association had three representatives, later five, and in 1982-83 there are eight.

When the faculty first took over the administration, the office staff consisted of the dean and one secretary. Miss Louise Peers was an exceptionally competent secretary who remained with the faculty for many years. They were housed in two small rooms on the third floor of the Administration Building. As the number of graduate students increased rapidly it was soon necessary to increase both the staff and the office space. A second secretary was all that could be accommodated in the small office and when

further staff was added the faculty offices were transferred to a much larger area on the ground floor of the same building. This permitted the inclusion of a room in which oral examinations, committee meetings and general consultations could be held. Later the office was transferred to University Hall, where it has remained.

Soon after the additional space was acquired an assistant to the dean was appointed. Correspondence from and to prospective applicants became progressively heavier and Thorlief Fostvedt was appointed to look after much of this routine work. His addition proved adequate for a couple of years but it then became apparent that a more senior appointment was required and Eric J. Hanson of the Department of Economics became associate dean in 1964, and held that position until 1967. A graduate registrar, Harold R. Hawes, was also appointed in 1964. He handled official admission and assessed fees. He has been a tower of strength for many years.

Many senior academic staff members besides those actively involved in administration contributed a great deal during the rapid growth of the faculty. Some of those were Max Wyman, Mathematics; Harry E. Gunning, Chemistry; Henry Kreisel, English; Arthur W. Reeves, Educational Administration; and George Garland, Physics. The first two were later Presidents of the University, Dr. Wyman from 1969 to 1974, and Dr. Gunning, 1974 to 1979. Dr. Kreisel was Associate Dean of Graduate Studies from 1967 to 1970 and Vice-President (Academic) for the next five years.

In 1967 the faculty was renamed the Faculty of Graduate Studies and Research and given responsibility for the administration of all outside research grants. This added greatly to the work of the office and two associate deans, Henry Kreisel, full-time, and R. K. Brown, half-time, were appointed. Dr. Kreisel served until he was appointed Vice-President in 1970 and Dr. Brown held his position until his death in 1974. In 1969 Gordon A. Holmes was appointed as Research Grants Officer, a position he held until his retirement in 1982.

The responsibility for research grants has recently been taken over by the Vice-President (Research), thus relieving the Faculty of Graduate Studies and Research of what was becoming a heavy load.

When Dr. Max Wyman, who had been Vice-President (Academic), became President, the Dean of the Faculty, Dr. A. G. McCalla, took over as Acting Vice-President (Academic) in September 1969, and Henry Kreisel became Acting Dean of Graduate Studies. This was a temporary

arrangement as A. G. McCalla, who retired from the University in 1971, returned to the dean's office in July 1970 when Dr. Henry Kreisel was appointed as Vice-President (Academic).

John McGregor, Mathematics, was appointed as the second dean and held the position for five years. He was succeeded by John Forster, Sociology, who was dean until his death in 1982.

The Early Years

1908 - 1925

At the first recorded meeting of the Committee on M.A. and M.Sc. Degrees it was decided to ask each department head to furnish the committee with a statement of what he regarded as the prerequisites for admission to candidacy for the degree of M.A. in his department. These statements were considered by the committee and either accepted or amended.

It appears that a program required for an M.A. degree was an "acceptable" B.A. followed by four courses. It further appears that, for a time at least, not more than two of those four courses could be in the discipline in which the candidate specialized; i.e. if a candidate was to get an M.A. in Psychology, not more than two advanced courses in Psychology could be counted towards completion of the M.A. program. The other two courses were to be in "related" fields, e.g. Philosophy and Education. It also appears that this regulation was not rigidly applied.

The word "program" does not appear in any of the early minutes of the committee. All references are to the "course" leading to an advanced degree. This is frequently confusing because the "course" leading to the degree required the completion of four "courses" in related work. In later years the word "program" of studies was used to cover the total requirements for the degree including, where appropriate, the thesis requirement. It is therefore proposed to use the word "program" for the requirements for

graduate degrees in the earlier years, even though it was not used in any of the records.

In the above description of the program required for an M.A. degree, the words “it appears” are used. This is because the early minutes are not clear as to exactly what was meant. For example, the statement regarding the requirements for the M.A. or M.Sc. reads:

The honours course in any subject running through two years, together with the associated ordinary courses, may be regarded as fulfilling the requirement.

There is also appended a statement that:

At Toronto at that time (1915) the corresponding statement read: “A graduate of an Honours Course on obtaining Honours in the fourth year in another Honours Course may be granted the degree of Master of Arts”.

The minutes of the committee meeting of November 8, 1915, record that it was agreed that:

A candidate who elected to proceed to the degree by method (a) (courses only) must submit the course of study which he proposes to follow to the Committee on Graduate Studies and receive its approval, on or before the first day of November of the year in which he undertakes his work for the degree.

A candidate who elects to proceed to the degree by method (b) (Investigation) must submit the subject of investigation he proposes to carry out to the Committee on Graduate Studies and receive its approval, on or before the first day of November preceding the spring in which the degree is to be taken.

Many of the courses taken by candidates for graduate degrees in these early years were taken extra-murally. There do not appear to have been any firm regulations regarding this, but approval was given for at least two courses to be taken extra-murally by an appreciable number of students.

A striking feature of many of these early programs was the requirement by the committee that the program be discussed not only with the department concerned but also with President Tory. The minutes of the Faculty of Arts and Science for March 17, 1911, record, for example, that "reading for M.A. work for Geo. D. Armstrong was referred to the President and Dr. Broadus with powers," and the minutes of November 28, 1912, refer to the application from Rev. Mr. McNiven for admission to an M.A. program in History and English, "the details of the course to be arranged in consultation with President Tory and Professor Broadus." The October 7, 1913, minutes report that R. S. Sheppard applied for an M.A. in Astronomy as a major and Physics as a minor. When the committee wanted more information regarding Mr. Sheppard's earlier work, it was Dr. Tory who reported that Sheppard had been gold medallist at the University of Toronto and had done exceptionally good work at the Lick Observatory "for which certification would be produced and which far exceeded the practical work in astronomy needed for an M.A. degree."

Another striking feature of many of the early graduate programs is the large proportion of senior undergraduate courses which were accepted for graduate credit. Examples are furnished by the program accepted for N. D. MacDonald, which consisted of History 53, 57 and 59 and Philosophy 51 (all undergraduate courses); and for S. R. Laycook, which included Latin 53, Greek 53 and Education 51 in addition to Latin 102 and 111 (the last two honours and graduate courses).

The first reference to a graduate program involving an investigation is in the minutes of the meeting of February 14, 1916. (There are, however, several earlier theses based on investigations which are deposited in the University Library.) W. F. Seyer applied for approval of an investigation of Alberta tar sands, the work to be carried out in the Department of Chemistry, under the direction of Dr. Lehmann. The thesis on this topic was considered by the committee on March 8, 1918, under the title, "A Chemical Investigation of the Bitumin in the Bituminous Sands of Northern Alberta." A question arose because Mr. Seyer had submitted a copy of this thesis to the University of Chicago before submitting it to the Committee on Graduate Studies and the committee members considered that Seyer had "jeopardized his degree" by taking this action. Committee members also wanted to know what relation, if any, there was between Mr. Seyer's work for the thesis and his work for the Honorary Advisory Committee for Scientific and Industrial Research.

Dr. Lehmann submitted a letter to the March 29 meeting of the committee taking responsibility for Seyer's action in sending the thesis to Chicago in support of an application for a scholarship. The committee accepted the explanation and permitted Seyer to take the final oral examination, and his M.Sc. degree was awarded at the 1918 Convocation.

In order to prevent other incidents of this kind, however, the committee decided to insert a clause in the Calendar for the coming session, which would require that a candidate for a graduate degree obtain the permission of the committee before submitting thesis material to any other organization or institution. This was approved on March 29, 1918, at the time that Seyer's thesis was accepted.

It is worth noting that this problem persisted for many years and became most acute when departments wished to secure the publication of results obtained in scientific research well before students had prepared their theses. This is particularly important to Ph.D. students in rapidly advancing scientific fields where priority in publication is of considerable significance.

At the April 17, 1916, meeting, the committee considered a long letter from Elmer L. Luck requesting that he be granted the Ph.D. degree on the basis of work done at the University of Leipzig from 1912 to 1914. He was at Leipzig when World War I broke out; his thesis had been unofficially accepted at that university but he had been interned. (There is no reference as to how he got out of Germany by 1916, but his daughter says that he was released to accompany another internee who was sent back to Canada for health reasons.) The final oral had been scheduled for the fall of 1914. He had also applied to the University of Toronto for the Ph.D. degree but that institution had demanded that he pass a final oral examination.

The committee decided that:

(1) The University of Alberta has no equipment for conferring the Ph.D. degree in course; (2) to do so in this case would have the effect of a degree conferred in course; and (3) we have no means of judging the adequacy of Mr. Luck's dissertation, nor have we the staff to conduct an oral examination in this subject.

It is of some interest that Mr. Luck did not receive the Ph.D. from any institution.

On November 2, 1916, the committee considered a request from the

Committee on the Review of the Curriculum for the B.Sc. in Arts that Graduate Studies consider the question of granting an M.Sc. degree subsequent to a B.A. and an M.A. degree subsequent to a B.Sc.. After consideration of the Alberta practice and that of various sister institutions, the committee decided that "it was inadvisable to alter the practice now in vogue at the University of Alberta." Nevertheless, a program leading to the M.Sc. had been approved for R. B. Sandin, B.A., who proposed to carry out an investigation for an M.Sc.. This program was later revoked and Sandin proceeded to an M.A. degree by courses.

These incidents illustrate the difficulties faced by the committee in the early years. Often a particular question did not arise until there was a problem. The problem was then discussed and usually settled by making an *ad hoc* decision that sooner or later gave rise to other problems. Obviously the committee, the members of which had many other duties, could not or did not take time to attempt to work out an integrated set of regulations. It was well into the 1920s before some coherent regulations were evolved.

Although several theses on Alberta coal and the tar sands might well have been considered as meriting M.Sc. degrees in Mining Engineering, the first Master's degree designated as in Applied Science was granted in 1922, when Harry Webb was awarded a degree in Civil Engineering. The first M.Sc. in an Agricultural discipline was conferred in 1923 on William Hanna in the Department of Field Husbandry (later Field Crops and still later Plant Science).

The B.Educ. degree was proposed by Dr. J. M. MacEachran on December 20, 1921. It was to be a graduate degree, the program open to holders of an undergraduate degree. It is significant, especially to later developments, that it was also to be senior to the M.A. in Education. The program was to consist of 8½ courses plus thesis. Candidates who already held an M.A. degree took reduced programs. The proposal was accepted by the committee. The first recipient was S. R. Laycock in 1923. Two of those who already held the M.A. were H. E. Smith and M. E. Lazerte who received the M.A. in 1925 and the B.Educ. in 1926. Both were later deans of the Faculty of Education at the University of Alberta.

This may be an appropriate place to mention by name some of the persons who received graduate degrees in the early years and later played important roles in the field of secondary and post-secondary education. G. Fred McNally has already been mentioned. He was to be in turn, the

principal of the short-lived Edmonton Normal School in the early 1920s, the Deputy Minister of Education and the Chancellor of the University. R. S. Sheppard was a teacher, then principal and finally superintendant in the Edmonton public school system. LeRoy Mattern, J. G. Niddrie, Miriam Bowman, A. M. Munro, E. E. Hyde, and Margaret Gold taught in Edmonton high schools, with Miss Gold later joining the teaching staff of the University. J. E. Loucks and D. A. McKerricker taught in Alberta Normal Schools and F. G. Young at the Calgary Institute of Technology. A. E. Ottewell served the University in the Department of Extension and as Registrar; R. B. Sandin and N. W. Stover were staff members in the Department of Chemistry; Fulton Gilesie served in the Faculty of Medicine; and Harry Webb in the Department of Civil Engineering.

It was not until the meeting of December 20, 1921, that the committee agreed that "the Chairman (Dean Kerr), with the assistance of the secretary when required, should in future deal with all merely routine cases and such cases as can readily be settled by consultation with the departments concerned." Until then every detail of every admission and every program had been approved by the committee.

On March 8, 1918, the committee had agreed that all theses should be a standard size, on special thesis paper, 8 inches by 9½ inches, with a two-inch margin on the left side. It was not long before it was recognized that this was frequently unsatisfactory. On February 22, 1922, Dean Boyle of Applied Science pointed out to the committee that this size was most unsuitable for scientific theses which contained tabular data. At the next meeting Dean Boyle reported that one of his students would use standard 8½ x 11 inch paper. He had been advised to consult the Librarian regarding accommodating the larger theses on library shelves and no difficulty was foreseen. It was then agreed that the standard letter size would be used for all scientific theses.

This matter was discussed again on May 8, 1935, as a result of the variation in the binding and appearance of theses presented. It was finally agreed that it was necessary to accept the two sizes "in which theses are at present submitted, owing to the necessity of sometimes including cuts and designs which cannot be compressed into the 'regular' format." It was decided that all theses should be bound in stiff boards and the title of the thesis and name of the author be printed on the front cover. This regulation applied only to the copy to be placed in the University Library.

The requirement of the print on the front cover was soon rescinded. As a matter of fact, the proportion of theses submitted on the smaller paper decreased steadily and the last thesis so submitted was in 1950.

During the early years there seem to have been few regulations covering theses. There is tremendous diversity in the early theses filed in the library.

The first four were submitted in partial fulfilment of the requirements for the Bachelor of Divinity degree, considered at that time as a graduate degree but not administered by the Committee on Graduate Studies. There is no reference to these theses or candidates in any minutes relevant to this review.

The earliest theses submitted by people who received Master's degrees date from 1911 when J. A. Fife submitted seven pages of double-spaced typing on the topic "Alberta Coals"; E. L. Hill submitted 19 small pages of double-spaced typing on "Lacustrine Clay of the Edmonton Region" which report the results of "some one hundred and twenty five hours of laboratory work"; and C. A. Curtis submitted 14 small pages of double-spaced typing on "Clays—Origin, Distribution and Composition." There is no indication as to where the experimental work was done or under whose supervision. All of these men received M.Sc. degrees.

Jennie Stark Hill also submitted a thesis in 1911 as partial fulfilment of the requirements for the M.A. It was on 40 pages of double-spaced typing entitled "Gladstone and Reform." G. Fred McNally did not submit a thesis.

Subsequent theses might be single-spaced typing (Dobson, 30 pages, English); double-spaced on 8½ x 11 paper (Dyde, 60 pages, Psychology); double-spaced on 8 x 9½ paper (Mitchell, 103 pages, Psychology); etc. The thesis submitted by James Adam in 1915 was the first to carry the statement:

The undersigned hereby certify that they have read and recommend to the Faculty Council for acceptance a dissertation on "The Psychology of Impressionism" submitted by James Adam, B.A., in partial fulfilment of the requirements for the degree of M.A.

It was signed by John M. MacEachran. Presumably the "Faculty Council" referred to was the Council of the Faculty of Arts and Science. These early theses were accredited to the faculties rather than to the departments.

Many of the early theses carry no signature(s) of staff members. Although there was tremendous variation in this respect up to 1924, an increasing number did carry approval signatures, some had one, some two, but

gradually it became more common to have three. Some of the early theses did not mention the degree or the department involved, nor give any indication as to the faculty member under whom the work was carried out.

In these early years it was rather common for full-time staff members—even full professors—to be registered for graduate programs. Many of the early appointees held only Bachelor's degrees. Examples are: E. A. Howes, B.S.A., was Dean of the Faculty of Agriculture; A. A. Dowell, Professor and Head, Animal Husbandry; J. M. Smith, Professor and Head, Agricultural Engineering; J. F. Morrison, Associate Professor (later Professor) of Civil Engineering. In the early 1920s some courses were taught by newly appointed staff members who were on graduate programs. One very interesting case was M. E. Lazerte who taught a course, Education 52, and was also given credit for this course as part of his M.A. program. It was agreed "that this would be done if he did an extra essay in connection with this course."

To sum up these early years, it can be said that it now seems obvious that faculty members had very little time for the consideration of general regulations governing graduate work and the problems arising from such work. At the end of fifteen years general regulations began to emerge and the next few years saw a much more consistent approach to graduate education at the University.

The Middle Years

1926 - 1957

The 1925-26 session marks the apparent start of an effort to put graduate studies on a sounder basis. Some of the first steps in this procedure were:

1. The minutes of the old Committee on Honours and Graduate Studies were to be searched and entries regarding graduate students were to be copied and added to the beginning of the minutes of the existing committee. (This was done.)
2. There was discussion of the existing regulations for the M.A. degree and the suggestion that a minor investigation be required of all candidates.
3. It was agreed that "an applicant for a graduate degree be admitted to candidacy only after any preliminary requirements had been performed to the satisfaction of the Department concerned and the candidate's complete *program* has been approved; and that candidacy be made a matter of formal record by the Committee." This appears to be the first use of the term "program," but the term "course" was still used in the official regulations as recorded in February 23, 1927.
4. The question of increasing the requirements for the Master's degree after a pass Bachelor's degree as compared to the requirements after an honours degree was discussed. The chairman asked that consideration be given to the proposal that holders of pass degrees be required to complete six courses and a thesis instead of four courses and a thesis as

- required at that time. This was considered, approved and recommended to General Faculty Council and Senate for comments and confirmation.
5. It was decided that in future the practice of adding the faculty name to degrees would be discontinued. Hereafter all M.Sc. degrees, regardless of the faculty, would be merely listed as M.Sc.

The chairman reported to the November meeting of council that registration with the committee for 1925-26 was a total of 79, made up of 16 Special Graduate Students, 29 Extra-mural, and 34 Intra-mural students. One of these had withdrawn. Thus graduate studies still played a very minor part in the University's overall work. (The total University registration that year was 1,001.)

The May 1, 1930, meeting of the committee makes the first reference to graduate scholarships. The Robert Tegler Scholarship was described as: "One research scholarship at \$600.00 for one year to a graduate student in any faculty of the University who desires to prosecute research at the University, the award to be made on the recommendation of the Committee on Graduate Studies."

President Wallace raised the question of seeking additional Tegler Research Scholarships. It was agreed that this should be pursued. It is later reported that two Tegler Scholarships were to be awarded although there is no record of any correspondence regarding this.

In the spring of 1931, there were nine applications for the Tegler Research Scholarships and two were awarded. Five of the applicants were in the humanities and social sciences and four in the natural sciences. It was agreed that, other things being equal, the awards should be made to graduates of the University of Alberta, although no reference to any directive could be found in the deed of gift.

Further discussion of student awards is contained in a separate section of this review.

More rigorous rules governing extra-mural courses were reported to the November 8, 1933, meeting of the committee. Several extra-mural registrations had been refused but there were still 16 of 90 graduate students taking extra-mural courses for credit. Incidentally, the total registration of 90 was 38 less than in 1932, probably reflecting the very severe depression.

In late 1934, considerable time was given to the question "how far the Committee on Graduate Studies might go in co-operating with laboratories of recognized standing external to the University in connection with

investigations undertaken by graduate students for whom the University of Alberta laboratory facilities were not adequate.”

It is worth noting that, in contrast to attendance in the early years, the number of committee members at these meetings was usually ten or more, representing at least four faculties and often including the President, Dr. Wallace.

A sub-committee of three, representing three faculties (Agriculture, Applied Science and Medicine) had been appointed to make recommendations to the Committee on Graduate Studies. The report of this sub-committee on work done at laboratories outside the university follows:

Your sub-committee begs leave to report in its opinion the scheme under method “b” is desirable provided:

- a. Such work could not be carried on at the University of Alberta through lack of adequate laboratory facilities, proper materials, etc.
- b. That the proposed extra-mural laboratories are properly equipped to enable the student adequately to carry on his proposed investigation.
- c. And that such laboratories are under the direction of persons who, in the opinion of the Graduate Studies Committee, are competent and properly qualified to direct and guide the student.

Special care should be taken in such extra-mural cases to size up the candidate individually to determine if he has the proper prerequisites, personality and character to enable him to carry out his work in outside labs.

The schedule or programme of work proposed for the student should be outlined by the Committee on Graduate Studies, or by the person delegated by this committee in co-operation with the technical supervisor of the lab., and regular reports of progress from both the supervisor and student should be forwarded to the department of the University of Alberta, or local adviser, who is sponsoring the student. The written thesis should be submitted to the Committee on Graduate Studies and read in the usual way, and on its acceptance, the candidate should appear at the University of Alberta for his oral examination.

The question of publication of results obtained by the student prior to the acceptance of the thesis by the Committee on Graduate Studies raises a grave question and your committee is of the opinion that the publication of such results in the form of a summary would have to be

allowed. Special care will need to be exercised to see that the work as indicated in the thesis and the compilation of the thesis is in the major part the work of the candidate—this to be verified by statements of both the candidate and his laboratory supervisor.

Your committee also suggests that the applying for permission to undertake such work to the Committee on Graduate Studies, the application to the supervisor of the proposed laboratory, and the arranging of programme, etc. be done by the candidate, with the advice of the Department of the University of Alberta which is sponsoring the candidate.

A thorough discussion, in which all members of the committee took part, followed. In the end the consensus arrived at was that non-university facilities, such as the Mines Branch Laboratories in Ottawa, the National Archives at Ottawa, or a great library especially well equipped in a special field should be regarded rather as last resorts to which a student should be sent. If the University facilities were not adequate, it seemed to be the general opinion that a student should be directed to another university whose facilities would be manned by teachers. If, however, no university could be found adequately equipped for the investigation in mind, then recourse might be had to other facilities such as those mentioned. As, however, there were a good many considerations suggesting that any move should be made cautiously, it was agreed finally to ask President Wallace to correspond with other universities, such as Toronto and Queen's, which, it was believed, might be interested in the problem.

The matter was taken up again early in 1935 and is best covered by a quotation from the minutes of the committee for February 25:

Question of co-operating, for research work, with external laboratories and libraries

The Chairman stated that he had invited President Wallace to come to the meeting, as the latter had been in correspondence with some eastern institutions in relation to this problem and has also discussed the matter to some extent, when in Ottawa at a recent meeting of the National Research Council. Dr. Wallace read two letters which he had received, one from Principle Fyfe of Queen's University and one from President Cody of the University of Toronto. The purport of both letters was to indicate that, although a certain amount of co-operation is already in

existence between the institutions concerned and, in particular, the Archives in Ottawa, nothing had been undertaken as a matter of policy, but individual cases had been treated on their merits. The President suggested that, as he saw the problem, it might be as well for us to proceed along the lines adopted at the previous meeting of the Committee and as in the case of Toronto and Queen's to deal with any case which arose individually and on its merits. In reply to a question from Mr. Pitcher as to the possibility of securing, say from the Mines Branch, some payment for students' services, the President said he expected to be in Ottawa at an early date and would endeavour to take up with Dr. Camsell this question. He thought that Dr. Camsell was in favour of some monetary assistance being given by the Department, but of course would need the consent of his minister.

There is no further reference to this matter in the minutes of succeeding meetings. Dr. Wallace left the University in 1936.

The committee considered a report on October 16, 1935, that one of its scholarship holders now proposed to work in a project different from the one originally approved. There was great reluctance to approve this even though President Wallace assured members that the new project was "fully as valuable to the province as the one originally approved." The committee demurred and the chairman was instructed to write to Dr. Allan (Geology) for further information. The next meeting reluctantly agreed to the change, but it was decided to insert a statement in the Calendar that "any registration, into which a change had been introduced—whether in course work or thesis topic—would be invalidated unless the committee had given its formal approval to the change."

Discussion took place regarding an apparent confusion in the public mind as to the degree of M.A. in Education and the B.Educ. It seemed to be the general feeling that something should be done to rectify the possible misapprehension which possession of one or other of these degrees might cause. It was clear that in other institutions it was not understood just why the M.A. in Education should be junior to the B.Educ. Dr. Macdonald explained that the difficulty, he thought, had arisen "through our adoption of the Scottish procedure, according to which the first degree normally is the Master's degree and the B.Educ. a professional degree." No definite resolution was passed, but the sense of the discussions implied that some steps should be taken to clarify the matter.

In early 1936 the chairman again raised the question as to whether something should be done in connection with the form of the degree in the case of the Bachelor of Education.

Owing to the fact that we now have a Department of Education, it seemed somewhat anomalous that a student might secure the M.A. (in Education) and at a subsequent date take the Bachelor's degree in Education, the latter representing a great deal more work than the earlier master. An extended discussion ensued. Some members of the Committee wondered if it would not be wise to change the Bachelor of Education to Master of Education. This would involve the giving of two masters and perhaps for the public some obscurity in the relationship of one to the other. Mr. MacEachran pointed out that, while the present position is undoubtedly somewhat illogical, it remained true that the institutions which had to deal with students from here holding the B.Educ. understood perfectly well what it meant. He himself, although he had at first thought a change was desirable, had come to the conclusion that, as the degree which had now been given for a good many years was thoroughly well understood in such institutions as California, Chicago, Toronto and London, it would be better on the whole to let the matter stand. In the end the Committee unanimously agreed with this view and it was decided not to propose any change to the University Senate.

No further action was taken on this matter until 1939. It will be dealt with later.

At this time, consideration was given to the amount of work done elsewhere that would be considered as meeting part of degree requirements at Alberta.

The Chairman stated that hitherto there had been a general understanding, although he did not think it had taken the form of legislation, that not more than one half of the necessary work would be accepted by the Committee on Graduate Studies. In view of an application which was pending from a student who had done work at Iowa and Purdue, he wondered if the Committee would care to make explicit the maximum amount of credit this University is willing to accept. Opinion in the Committee varied from the acceptance of approximately one-quarter of

the necessary work to a minimum of one year's study here. In the end the opinion prevailed that it was perhaps wiser not to lay down any specific numerical maximum, as in each individual case the rank of the institution from which the credit had been secured would probably vary and make any mathematical calculation unreliable. It was decided, therefore, to deal with each case on its merits.

In February 1936, there was a discussion regarding the relationship of the thesis to the total amount of work required for the Master's degree. After considerable discussion it was agreed that the committees appointed to supervise the examinations of all candidates should be informed of the relationship in each case and that a statement, placed at the front of the thesis, should show clearly how heavily the thesis should be weighted.

It was also agreed, on May 6, 1936, that while it might not invariably be possible, whenever feasible one member of the committee appointed to read the thesis and conduct the examination should represent a department other than that in which the student did his work. (It should be noted that this was rarely the case in the 1920s but had gradually become more common in the 1930s.)

The 1936-37 session saw a new chairman for the committee—the first change in over 20 years. Dean Kerr had been appointed President and Professor G. M. Smith of History was the new Dean of Arts and Science and therefore the new chairman of the committee.

That graduate work did not increase very much is shown by the registration figures for 1938-39. There were only 93 registrations in 14 departments. Of these, 48 were in Education (still only a department), 11 in English and 10 in Agricultural departments. Extra-mural courses were still accepted for credit; the records show that there were "many" in Education and a few in English and History. There were none in the sciences.

The situation in Education gave rise to serious consideration of the number of credits a candidate could receive extra-murally and at Summer Session. A sub-committee recommended and the Committee on Graduate Studies adopted the following report:

No graduate student proceeding by extra-mural study and summer session may offer examinations in more than three courses annually. If two courses are offered at the end of Summer Session in August, only *one*

may be offered in the following April; and if two courses are offered in April after extra-mural work during the winter session, only one further examination may be offered in the following August.

Graduate students proceeding by extra-mural study and Summer Sessions are advised to attempt only two courses annually.

On February 22, 1939, a sub-committee was appointed to consider the M.A. and B.Educ. degrees in Education. Despite the earlier decision to leave things as they were, with the B.Educ. considered more advanced, the anomaly was becoming more troublesome. Professors Macdonald (Philosophy), Lazerte (Education) and Gordon (English) were later joined by Professors MacEachran (Philosophy) and H. E. Smith (Education). This sub-committee reported to the October 18, 1939, meeting of the Committee on Graduate Studies:

The Committee points out that there is a considerable body of students interested in doing some further work in the professional study of Education and is of the opinion that this desire should be met. On the other hand, there is a much smaller group interested in more advanced work amounting to specialization in this field.

It was recommended:

1. That the M.A. in Education be discontinued;
2. That a degree (B.Educ.) be instituted to meet the needs of the first group referred to above;
3. That a higher degree (M.Educ.) be instituted to meet the needs of the second group.

The M.Educ. would replace the old B.Educ. and correspond to it. (It must be remembered that teachers at that time got their basic training at Normal School and did not require a University degree.)

Under the proposed regulations, students seeking the new B.Educ. would be required to hold a B.A. or B.Sc. degree. They would be required to pass six additional courses and produce a minor thesis. Teachers who held an Honours B.A. or B.Sc. could go directly into an M.Educ. program but could take the B.Educ. if they wished.

The Senate of the University approved the regulations for the reorganization of Education degrees at its December, 1939, meeting. As a result,

no further registrations were to be accepted for the M.A. in Education or for the old graduate B.Educ. degree. Students who had already registered for the M.A. (Educ.) could proceed either under the old rules or the new regulations leading to the new B.Educ. Several students did continue under the old rules. Students registered for the old B.Educ. prior to the change were considered as proceeding to the M.Educ. (later the M.Ed.) provided they had obtained the M.A. before December 1939. They would complete the old B.Educ. program but be awarded the M.Ed. Students who had obtained the B.Educ. degree before December 1939, might return the old B.Educ. parchments and receive new M.Ed. parchments. A few graduates accepted this offer, W. H. Swift among them.

The regulations were revised on April 9, 1941, to meet the changes in the administration of Education programs made necessary by the new University Act. The newly established Council of the College (Faculty) of Education took over the administration of the B.Educ. programs but the M.Educ. programs remained the responsibility of the Committee on Graduate Studies.

The first M.Educ. degrees were granted to J. W. Chalmers and J. F. Watkin in May 1941.

The obligatory thesis requirement for the M.Educ. was replaced in 1945 by the requirement of two extra courses and a comprehensive examination. President Newton objected to the change and the School of Graduate Studies initially rejected it. Subsequently, the matter was taken to the Deans' Council by Dean Lazerte of Education and again the President expressed the idea that this merely served to degrade the degree. Eventually, the School of Graduate Studies recommended that the change be tentatively adopted but reconsidered in two years. This recommendation was adopted.

In 1947, Dean Lazerte recommended to the school that the comprehensive examination be eliminated. Again President Newton objected and it was decided to review the whole question—thesis, comprehensive examination and other requirements for the degree. It was very clear that the President thought the school should revert to the thesis requirement. Dean Lazerte opposed this vigorously on the grounds that there were a very large number of students proceeding to the degree and there was no way that the faculty could give adequate supervision. He felt that, in view of the President's strong feelings, the comprehensive examination should be continued.

A long discussion followed with many of the non-Education members

of the school council expressing a rather low opinion of the comprehensive examination—in fact insisting that it was rather a “fragmented examination of the regular courses.” It was also pointed out that, at some universities in those states of the U.S. which required teachers to have a Master’s degree, the requirements for such degrees had been so watered down that many science departments were advising students not to register for the Master’s degree but go straight into a Ph.D. program. Since we had no such programs open to Alberta graduates, it was the general opinion that the Master’s degree, as our highest degree, should be protected. Nevertheless, it was decided to leave a final decision to a later date but all new registrations would be subject to revision if there was a change.

A year later the Chairman of the School of Graduate Studies reported that in all cases where a comprehensive examination had been held, the reports were adverse. It was then moved by H. E. Smith of the Faculty of Education:

That the present M.Ed. route calling for a comprehensive examination in place of a thesis be discontinued and that M.Ed. requirements be in conformity with route “b” as now stated in the calendar, so far as the number of courses and the thesis are concerned.

This was carried unanimously.

Dean Lazerte wrote a letter in protest saying in part that “we lost a very valuable training program.” The school reaffirmed its position.

During the war much of the research effort of graduate students (and staff) was concentrated on war projects. The results were considered as classified, so the theses, although prepared in the usual manner, were not deposited in the library. The library copies were held by the departments until the results were declassified in 1950. The departments most affected by this were Chemistry, Plant Science and Soils. In 1944 alone, six Chemistry theses were so classified.

In 1946, the President, Dr. Robert Newton, sent a letter to the committee outlining a scheme for instituting a Ph.D. degree. The details of the development of doctoral programs play such an important part in this review that they are dealt with in a separate section. It may be noted in passing, however, that General Faculty Council approved on May 10, 1946, a recommendation from the committee that the Ph.D. be offered, but only to graduates of other universities.

The need for the Ph.D. degree had become more urgent in those science departments in which advanced research was being carried on. Much of this research was done by graduate students and the M.Sc. was quite inadequate to give credit for the work done. This is well illustrated by an incident experienced by one faculty member who, in 1943, was asked for the loan of one of his students' thesis. When the professor from Queen's University returned the thesis he appended the following note:

Do you mean to say that the work represented by this thesis earned the poor devil only an M.Sc.? At Queen's this thesis would satisfy Ph.D. requirements.

Late in 1948, the school adopted a suggestion that a short summary of the methods and results of the investigation should appear on the page following the title page of the thesis.

In 1951, there was a lengthy discussion on the desirability of separating the administration of Graduate Studies from the office and chairmanship of the Dean of Arts and Science. In general the preference was for a Faculty of Graduate Studies with a dean, but some members felt that if the school (established in 1939) had a director who was not responsible for a faculty, that this would be adequate. As already recorded, the latter plan was adopted by the Board of Governors, and Dr. O. J. Walker of the Department of Chemistry became director and presided over the council meeting of October 16, 1952.

Although the Ph.D. had been accepted and there were a few students already in programs, no detailed regulations had been approved until 1949 and only a brief general statement appeared in the Calendar. At the October 16, 1952, meeting of council a committee consisting of H. Grayson-Smith (Physics), A. G. McCalla (Plant Science) and H. B. Collier (Biochemistry) was asked to draft detailed regulations and a Calendar statement. The details are discussed in the section on doctor's degrees. It is significant that all committee members were from science departments.

In December 1952, it was decided that a separate Calendar for Graduate Studies should be published as was done for each of the other faculties.

In 1955, advanced graduate work in Education was given a tremendous stimulus through a joint scheme of the Canadian Education Association—Kellogg Foundation—University of Alberta to establish an advanced school

of Educational Administration under the vigorous leadership of A. W. Reeves. The plan brought a number of outstanding students from all parts of Canada to M.Ed. and Ph.D. programs.

In 1956, the Faculty of Education proposed that two graduate diplomas be issued to students who had done work on M.Ed. programs but had not completed theses. The junior diploma was to go to those who had completed one year's work and the senior diploma to those who had completed two. Several members of the Council of Graduate Studies objected and the question was referred back to the Faculty of Education and the Registrar. Eventually it was resolved by the Faculty of Education taking the responsibility of recommending students for the diploma, and the School of Graduate Studies had no further responsibility, but the students received official recognition for the University work done. This decision did have an effect on graduate registrations as will be seen in the following section.

The Faculty of Graduate Studies 1957 -

The Faculty of Graduate Studies, as already indicated, began operations on September 1, 1957, with A. G. McCalla as dean. It was soon apparent that some administrative procedures needed overhauling and that regulations in general had been very loosely followed. A considerable difference was found in the manner in which different departments interpreted the regulations and in the leniency with which they reviewed "delinquent" students. For example, it was found that about 120 students who had registered for the M.Ed. had completed all course requirements but most of these 120 had not even selected a thesis topic, let alone started on thesis research, but they were still considered "active."

Since it seemed certain that most of these students were unlikely to complete theses regardless of the time permitted, and since many of them had taken courses without any thought as to how they would fit into a "graduate program," many of them were encouraged to utilize the course credits already obtained and receive a Diploma in Education from the Faculty of Education. This was done by at least a portion of the students involved. It should be noted that the Faculty of Graduate studies received excellent co-operation from the Faculty of Education in this matter.

The graduate students who had started programs many years before but were still considered active were not confined to Education departments.

The faculty council considered this matter at its first meeting and decided to introduce time limits for completing degree programs. After some discussion it was agreed to set a limit of six years for Ph.D. programs and four years for Master's degree programs, but to be lenient in enforcing these limits until they had been published in the Calendar for six and four years respectively.

These limits are still in effect in 1982-83.

Membership on the council of the faculty was altered to reflect the ever-increasing number of departments offering graduate work. The basis of membership was one member on council from each department with "an appreciable" number of graduate students.

Up until this time every record and every registration had nominally been approved by the council. In fact, as numbers grew, this policy became very cumbersome and in recent years council had really rubber-stamped everything but troublesome cases. The council of the faculty agreed that all matters that clearly met regulations were to be finalized in the dean's office and only questionable cases brought to the council.

The differences in interpretation of regulations among departments is well-illustrated by the following example. It had been the policy of the Department of English to require graduate students to take courses to fill in gaps in their knowledge of English literature. Professor F. M. Salter considered that this was often inappropriate and asked for opinions from council members. If an English graduate student took courses that were related to his program but in other departments such as History or Philosophy, could the M.A. degree be considered as in English? Council members, particularly from the sciences, were surprised at this question because their students often took many of their courses in related disciplines. There was unanimous agreement that such programs could be entirely satisfactory.

On April 18, 1958, the dean proposed that graduate students who worked the year round should register, without additional fees, for the intersession between May and September. As matters stood, official records showed only that such students were in attendance during the regular winter session unless they registered for Summer Session and paid fees. Only a brief discussion followed and the proposal was unanimously adopted. If such students registered for a course or courses in Summer Session, inter-session credit would be given for the rest of the period between the spring and fall sessions.

At about this time, graduate students showed some interest in organizing an association distinct from the Students' Union. The activities of the latter were related mostly to undergraduates and, while open to graduates, few of them took much advantage of facilities or activities. The gradual development of this interest is dealt with in a separate section of this review.

When the faculty began operations in 1957, there were very few scholarships available. The Scholarship Committee was asked to look into this and try to develop a proposal for expansion. The first effort of the committee showed that the members had rather limited vision, so the dean and Max Wyman developed a proposal for presentation to the Board of Governors. This question, and subsequent developments in the field of scholarships, fellowships and teaching and research assistantships, is also dealt with in a separate section on Financial Assistance.

As the faculty grew, the number of applications from foreign students increased. At first these applicants were admitted if their records and letters of reference were satisfactory. It soon became obvious, however, that some of those admitted were grossly deficient in the English language even though the referees had indicated reasonable ability. The faculty first discussed on April 7, 1959, the desirability of using the Graduate Record Examination in English as a check before admitting foreign students. The examination could be arranged to be held in any part of the world. There was further discussion on October 16 that year, but no definite decision was taken. It was agreed to consider each application individually.

Eventually the English language examination Test of English as a Foreign Language (TOEFL), conducted by the Education Testing Service, was introduced. Undoubtedly it served to eliminate some of the worst applicants who might otherwise have been admitted. Experience showed, however, that the TOEFL examination was by no means infallible. The 1982-83 Calendar carries the following statement:

- (3) All *non-Canadians* for whom English is not the major language (a) first *must* write and pass satisfactorily either the Michigan English Language Examination (The Director, Testing and Certification Division, English Language Institute, The University of Michigan, Ann Arbor, Michigan 48104, U.S.A.) or the Test of English as a Foreign Language (TOEFL, Educational Testing Service, Princeton, New Jersey 08540, U.S.A.) before formal admission can be given; and (b) in

addition, if formally admitted, must arrive on campus and write, *one week before registration*, an English Language Examination set and administered by The University of Alberta. Students whose performance is unsatisfactory in this English Examination will be allowed to continue their graduate work, but may be required to take English language instruction as part of their regular program.

Thus, the requirement of demonstration of ability to use English is reinforced by the requirement that special instruction in the language be taken if necessary.

As the number of foreign applicants increased, the screening procedures became more detailed. In some disciplines there were so many applicants that the departments concerned could not possibly accept all those who were qualified. Every effort was made to admit only those with the best chances of success.

While it is not worthwhile listing the complete record of applicants, a few examples will illustrate the problems involved.

1. From May 31, 1966, until March 6, 1967, the faculty received 1,820 letters of enquiry from India; 545 from Taiwan; 236 from the United Arab Republic (Egypt and Syria); 234 from Pakistan; and 149 from Hong Kong.
2. From January 1 to December 31, 1972, the faculty received 13,957 written enquiries from prospective graduate students. Of these, 8,892 were from outside Canada. A preliminary examination of academic records showed that more than 2,500 of these potential applicants were not academically qualified, but application forms were sent to over 6,000. Enquiries from India alone totalled 1,200 and 544 application forms were mailed.
3. In 1971-72, there were 998 new students admitted to the faculty and 116 of these were visa students (based on home addresses). Comparable figures for 1972-73 were 733 and 112. These 116 and 112 students were selected from the applications resulting from the more than 6,000 forms sent to potential foreign students each year. While the University had no official policies governing the admission of these students, it is obvious that decisions had to be made. If the student was acceptable on the basis of his academic record and letters of recommendation, the decision as to formal admission was left to the department concerned. If he was not acceptable to the faculty office, the application was not referred to the department.

Obviously one of the attractions for a foreign student to come to the University is the financial assistance that can be offered. Until 1970, the Province of Alberta graduate scholarships and fellowships were open to any full-time graduate student.

Experience showed that, each year, some of these awards were made to foreign students who were coming to the University on student visas or who were already here. There is no doubt that some of the very best graduate visa students were attracted to Alberta by these excellent awards. In 1970 the Student Assistance Board of the Province of Alberta directed that Province of Alberta scholarships and fellowships be restricted to applicants who were Canadian citizens or landed immigrants at the time of application.

National Research Council assistantships are paid from research grants to faculty members. For many years faculty members who held research grants from the National Research Council were permitted to hire foreign graduate students as research assistants. For science departments in many Canadian universities, this was by far the largest source of funds to support graduate visa students. Starting in the fall of 1970, the council ruled that only Canadian citizens and landed immigrants were eligible for such appointments, but that this ruling did not affect those visa students who were already on graduate programs in Canada. This ruling therefore had the effect of progressively reducing the number of visa students supported through NRC grants, and eventually eliminating all such support.

The result of these restrictions was to reduce the number of graduate students coming to the university on student visas.

Until 1963, the degrees offered by the Faculty of Graduate Studies were:

M.A. and M.Sc. offered from the start of the University.

B.Educ. first awarded in 1923 and discontinued in 1939.

M.Ed. offered first in 1939 and first awarded in 1941.

D.Sc. awarded first in 1924 and withdrawn in 1970.

Ph.D. offered first in 1946 and first awarded in 1953.

Ed.D. offered first in 1958 and first awarded in 1960.

D.Litt. first offered in 1958 but never awarded and withdrawn in 1970.

After 1963, however, the rapid expansion of graduate work is reflected in the proliferation of graduate degrees. The first was the Master of Business

Administration (M.B.A.) approved in 1963, and first awarded in 1966.

This was followed by:

<i>Degree</i>	<i>Approved</i>	<i>First Awarded</i>
Master of Law (L.L.M.)	1965	1967
Master of Engineering (M.Eng.)	1967	1968
Master of Health Services Administration (M.H.S.A.)	1967	1970
Master of Music (M.Mus.)	1967	1969
Master of Fine Arts (M.F.A.)	1968	1970
*Master Hospital Pharmacy (M.H.P.)	1969	1971
Master of Library Science (M.L.S.)	1970	1974
Master of Visual Arts (M.V.A.)	1970	1972
Master of Agriculture (M.Ag.)	1973	1975
Master of Pharmacy (M.Pharm.)	1975	1979
Master of Nursing (M.Nurs.)	1975	1979
Doctor of Music (D.Mus.)	1976	**
Master of Public Management (M.P.M.)	1981	**

* Discontinued, only two awarded

** Not yet awarded (1982)

The requirements for these degrees show considerable variation in the demand for a thesis, a project, or performance. It will be recalled that one of the major objections to the elimination of the requirement for a thesis, at the time the Faculty of Education wished to do this, was the conviction that the quality of the Master's degree must be protected since the Ph.D. degree was, at that time, not open to our own students. When the Ph.D. degree became available to Alberta graduates, the objection to offering Master's degrees without thesis largely disappeared but not without vigorous discussion.

In 1969-70 the Faculty of Education recommended that an M.Ed. degree without thesis be approved. There were many who opposed this, but the council eventually gave its approval. After that, the introduction of other degrees without thesis such as the M.Eng. and M.Ag., were more readily accepted.

Without going into details, the following are the more important variations in thesis requirements. These can vary among departments in the same faculty.

M.A.—Some departments offer a non-thesis option.

M.Sc.—Most departments require a thesis or a project.

M.Ed., M.B.A., M.H.A., M.L.S. and M.P.M. may be taken by the thesis or non-thesis option.

M.Eng. and M.Ag. require a project equivalent to at least a one-term course.

M.Mus.—Has special requirements depending on the program, but Composition and Theory require a thesis.

M.F.A.—Requires an acceptable thesis project presented in performance.

M.V.A.—Requires a presentation of creative work, considered as equivalent to a thesis.

Some special cases may be noted. In 1967, the Faculty of Physical Education applied for authorization to offer the Ph.D. This application was the cause of more general discussion than for almost any other application for the Ph.D. At the time, no other Canadian university offered such a program and some academics considered that the discipline did not lend itself to the rigorous type of study and research demanded in their own departments. The review committee established to make a recommendation on the application considered all submissions and were convinced that the program put forward by the Faculty of Physical Education, the quality of the staff and the excellent facilities available, fully justified approval. This was granted and subsequent experience has proven the decision to have been correct.

At times there was resistance on the part of some council members to the demand for new degrees. It is apparent that some of the degrees that have been approved are open only to students from a single faculty or even a single department. All degrees that have been approved, however, are recognized in the academic world and no new ones have been introduced. Acceptance of the widening scope of graduate studies certainly implied a willingness to accept the degrees normally associated with the work involved.

Until 1957, when the graduate work was reorganized under the faculty, the University of Alberta had played a relatively insignificant role in the total graduate studies in Canadian universities. After that date, however, the position of the University rose rapidly. By 1962 there is no doubt that it had

the fourth most important graduate faculty in the country. The evidence of the rapid rise is presented in Table I which compares some of the figures for 1956-57 and 1961-62.

Table I
A Comparison of Data for 1956-57 and 1961-62

<i>Item</i>	<i>1956-57</i>	<i>1961-62</i>	<i>Ratio $\frac{61-62}{56-57}$</i>
Total registrations	334	835	2.5
Ph.D. Registrations	18	180	10.0
Master's degrees granted	51	103	2.0
Doctoral degrees granted	5	27	5.4
No. of departments offering Ph.D.	11	30	2.7
No. of open awards	3	17	5.7
Total value of open awards	\$2,700	\$45,000	16.7

The number of students registered in the faculty increased very rapidly until about 1970 and then levelled off at over 2,000. Since then the numbers have fluctuated somewhat and this is reflected in the numbers graduating. Since 1970, the total number of degrees awarded in each year has varied from a low of 604 in 1975 to a high of 730 in 1972. The mean for the period 1970-82 is 656. The figures for Ph.D. degrees awarded during the same period varied from a low of 131 in 1982 to a high of 203 in 1973, with a mean of 163. There are now 51 departments offering the Ph.D., and a few interdepartmental programs in addition.

Registrations in 1982-83 were the highest they have ever been. There were 2,222 full-time and 943 part-time students registered with the faculty for the winter session. It is difficult to tell whether this is a reflection of the times or an indication that numbers may increase again. The larger registration will almost certainly result in larger numbers of degrees granted in later years.

That the faculty was attracting students from a wide range of countries is shown by the nationalities of the first 83 students to earn the Ph.D. degree. They were from: Canada 46 (55%); U.S.A. 8 (10%); India and Pakistan 9 (11%); United Kingdom 5 (6%); the Netherlands 4 (5%); and one each from Czechoslovakia, Germany, Greece, Hong Kong, Hungary, Indonesia, Iraq, Japan, New Zealand, Switzerland and Turkey.

In 1971-72, 329 students on visas (i.e. neither citizens of Canada nor

landed immigrants) came from 58 countries, and in 1972-73 the comparable figures were 274 from 49 countries. As already mentioned the decrease was undoubtedly related to the decrease in financial support for these students. The peak number of these was reached in 1968-69 at 469. There was only a slight drop to 454 in 1969-70 but the decrease was accelerated with the changes in financial assistance in 1970.

As a final measure of the development of graduate studies, the number of degrees awarded is foremost. The figures in Table II list all of the graduate degrees granted by the University up to and including those for 1982, both spring and fall Convocations. They have been arranged by five-year sub-totals for each degree, and show clearly the rapid increases after the 1956-60 five-year period.

Table II
Graduate Degrees Conferred, 1911 - 1982

Years	Degree						Total
	<i>M.A.</i>	<i>M.Sc.</i>	<i>M.Ed.*</i>	<i>Ph.D.</i>	<i>M.B.A.</i>	<i>Others</i>	
1911 - 15	11	5					16
1916 - 20	33	6					39
1921 - 25	63	20	6				89
1926 - 30	48	42	6				96
1931 - 35	42	80	4				126
1936 - 40	56	62	3				121
1940 - 45	34	64	11				109
1946 - 50	59	166	65				290
1951 - 55	44	177	49	7			277
1956 - 60	59	211	93	27			390
1961 - 65	177	449	224	201			1,051
1966 - 70	491	787	481	570	61	39	2,429
1971 - 75	438	918	663	921	271	189	3,400
1976 - 80	415	720	698	747	250	297	3,127
[1981 - 82]	172	297	256	287	110	157	1,279
Total	2,142	4,004	2,559	2,760	692	682	12,839

* Before 1940 these were the "old" B.Educ. degrees.

Doctoral Degrees at the University of Alberta

Although the first reference to a doctoral degree has already been mentioned (p. 8), the University did not give serious consideration to this matter until 1923 when Dr. J. B. Collip applied for a Doctor of Science (D.Sc.) degree on the basis of research already carried out and especially that related to insulin.

The Committee on Graduate Studies decided that, if the degree were awarded, the terms under which this would be done were to be essentially the same as those used by a well-established university such as the University of London. An internal committee would first consider the application and relevant documents. This committee would then make a recommendation to the Committee on Graduate Studies and, if the recommendation was favorable, the documents would be sent to three outstanding authorities in the particular field of work. If the judgement of the external examiners was favorable, the degree would be granted.

Over the next 36 years, the degree was conferred six times: J. B. Collip in 1924, Robert Newton in 1933, George Field in 1937, E. H. Strickland in 1954, Karlis Lesins in 1957 and Thomas Blench in 1959.

There were numerous other applications during this period. One of the specific requirements for considering an application was that a reasonable portion of the work leading to the degree must have been done at the University of Alberta. Many of the applicants were fully qualified in other

respects but had never been near the University of Alberta. One applicant suggested that he could meet this requirement by spending "a few weeks" at Alberta. Other applicants simply were not qualified. It is significant that no applicant approved by an internal committee was rejected by the outside examiners.

In view of the very small number of successful applicants over a long period, the D.Sc. degree was withdrawn in 1970.

In 1958, it was decided to introduce the Doctor of Letters degree, D.Litt., with essentially the same requirements as those for the D.Sc. The degree was approved by all the necessary authorities, but it was never awarded. It was withdrawn at the same time as the D.Sc.

The history of the Doctor of Philosophy degree (Ph.D.) is quite different. The first reference to this degree after Mr. Luck's unsuccessful attempt to persuade the University to confer it in 1916 was at the March 4, 1925, meeting of the committee. Dr. Robert Newton, Head of the Department of Field Husbandry, presented "a proposal for the authorization of Ph.D. work in the Department of Field Husbandry." The proposal stressed the financial assistance the research program of the department was receiving from the National Research Council of Canada. This had enabled the department to improve its equipment, and plan a program for the next ten years. The program was already well launched with the assistance of graduate students, five of whom were active at that time (most of them in Plant Biochemistry). The advantages to be gained by the introduction of Ph.D. level work were stressed. The support from other departments such as Botany, Chemistry, Biochemistry and Mathematics in giving courses fundamental or ancillary to research in Field Husbandry was considered to be fully adequate for Ph.D. programs.

It was proposed to encourage only those students who had demonstrated outstanding ability to remain for Ph.D. work. In order to ensure that students obtaining their Ph.D.'s from the University of Alberta should not be hampered by any narrowness of outlook or training, it was proposed, for the time being at least, to require that such students go for a year to another approved institution before completing their programs at the University of Alberta.

The committee, after discussion, expressed itself as being favorable to Dr. Newton's proposal and it was resolved to "forward the question to the General Faculty Council to obtain an expression of its opinion before taking any further action."

General Faculty Council considered the question on March 23 and April 27, 1925. There was a long discussion on April 27 and, while general sympathy was expressed, the consensus was that "it is too soon for this university to offer a degree of that standing because of our present lack of equipment and of a sufficient number of highly qualified instructors. At the same time it is recognized that the Field Husbandry Department is dealing with new problems closely related to this new country, and further that we should endeavor to keep our talented students in Canada."

The Committee on Graduate Studies was thanked for giving the members of the council an opportunity of expressing their views. No vote was taken but it was left to the committee to deal with the matter in the light of the discussion that had taken place.

No further reference to this question is made until the November 13, 1929, meeting of the committee. At that time, Professor R. Newton again raised the question of offering the Ph.D. degree. This time, however, he asked that consideration be given to the offering of the degree "in those departments which are suitably equipped." No decision was reached.

On December 18, 1929, the committee held a general discussion on the question raised by Professor Newton. Among those taking part in the discussion was President Wallace, who had served on the committee which inaugurated the Ph.D. program at the University of Manitoba. He stated that he had at first opposed this action but had later become convinced that it was useful. The committee was much more positive than it had been in 1925. "For the purpose of crystallizing the problem for further consideration by the Committee on Graduate Studies and consultation with the General Faculty Council, the Chairman was asked to appoint a sub-committee to draft tentative regulations governing the conferring of the proposed degree."

The sub-committee, consisting of the chairman of the committee, Dean W. A. R. Kerr, and Professors R. Newton and J. M. MacEachran, presented its report on January 22, 1930. After considerable discussion it was amended in a number of details, and adopted unanimously by the Committee on Graduate Studies. It was also agreed that this report be submitted to the members of General Faculty Council for their consideration at an early meeting.

The amended report and the proposed Calendar statement are recorded in full as follows:

Proposed Regulations for Ph.D. Degree

1. All work leading to a Ph.D. degree in this University shall be conducted under the general supervision of the Committee on Graduate Studies which shall authorize:
 - (a) the candidacy of the student
 - (b) the courses and the thesis prescribed
 - (c) all examinations relating thereto.
2. Generally speaking the degree shall be conferred only upon the basis of:
 - (a) broad scholarship in a general field
 - (b) specialized knowledge within a part of this general field
 - (c) capacity for original research.
3. Candidates must have completed work which is the equivalent of that done for an Honours degree in this University.
4. A minimum of three years graduate work will be required, of which not less than one shall be pursued in another institution. Normally at least two years' work shall be carried out in this University.
5. The requirements of study shall be as follows:
 - (a) a major subject which shall cover in a comprehensive way the general field in which the candidate is specializing
 - (b) a minor subject which shall be selected from another field
 - (c) a reading knowledge of two approved languages other than English
 - (d) a thesis which shall embody an original contribution to knowledge, and which is of suitable quality and presented in suitable form for publication; printed copies to the number required by the Committee shall be deposited free of charge in the University.
6. The Committee on Graduate Studies shall appoint a special committee to supervise the work of the candidate and to report upon his progress from time to time.
7. The examinations shall be as follows:
 - (a) a qualifying examination, written or oral, may be required before the student is admitted to candidacy
 - (b) a preliminary examination shall be held normally about a year before the final examination. This examination may be written or oral or both and shall cover the fields chosen for the major and

minor subjects. The language requirement shall be fulfilled before the candidate is admitted to this examination

- (c) a special committee, which shall include the candidate's supervisory committee and one or more external examiners, shall be appointed to read and pass upon the thesis. After the thesis is accepted the same committee, together with other persons who may be appointed by the Committee on Graduate Studies, shall conduct the final examinations written or oral or both.

(Proposed) *Announcement for Calendar*
Degree of Doctor of Philosophy

Candidates may be accepted for the degree of Doctor of Philosophy if the circumstances are such as seem to the Committee on Graduate Studies to warrant the authorization of such candidacy in this University.

Regulations governing the granting of this degree may be obtained from the Registrar of the University.

On February 26, 1930, the chairman reported to the Committee on Graduate Studies that General Faculty Council had approved the proposal for the Ph.D. degree "in principal and detail" but that "all candidates for this degree should be required to present a degree from another university." It was agreed that the matter was now to be referred to the Senate.

The minutes of the Senate meeting of May 14, 1930, record that the question of the Ph.D. degree was tabled until the next meeting. The October 10, 1930, meeting again considered the question briefly but agreed to hold it over "so that the matter might be further looked into by President Wallace and members of the staff."

No further reference appears in the minutes of the Senate during Dr. Wallace's presidency. Presumably the question of instituting Ph.D. programs was dropped because this was a period of very difficult financing, but also perhaps because Dr. Robert Newton, the strongest proponent of the development, left the University of Alberta to take up duties with the National Research Council of Canada in Ottawa.

It was not until the April 1946 minutes of the School of Graduate

Studies that the next reference to the Ph.D. degree occurs. Significantly, Dr. Robert Newton was then the President of the University and it was he who raised the question. He sent a letter to the committee outlining a scheme for instituting the Ph.D. degree at the University of Alberta, which would be open only to students who had graduated from another university and who wished to work with a particular staff member. The school agreed that if and when the proposal came before General Faculty Council, it would be supported.

Very strong support for this proposal came from the inquiries of several potential students regarding the possibility of working with particular staff members who had established reputations as first-class researchers in specific fields. When it was decided to introduce the program, each application was scrutinized very carefully to ensure that the applicant was really attracted by a particular staff member.

No specific regulations governing the Ph.D. degree were drawn up at this time. It seems certain that the regulations approved in 1930 (but never used) were to apply with the exception that applicants must be graduates of another university and they must demonstrate that they were attracted to work under a particular staff member.

The first reference to the Ph.D. degree in the University Calendar appeared in 1946-47:

This degree may be awarded by the University to a graduate of another university who pursues research work at the University of Alberta under the direction of a member of the faculty.

Application should be made to the Chairman of the Committee on Graduate Studies and should mention the proposed field of research as well as the member of the faculty under whom the applicant wishes to study.

The first recorded application was from a graduate of the University of Liverpool, who applied to work in the field of fuels with Mr. McCullough, who was Chief Research Engineer at the Alberta Research Council. He was admitted but did not carry out a program.

The first student who was admitted and eventually received the degree was P. F. Solvenuk in the Department of Biochemistry, but he was not the first to complete his degree program. That honor went to Clayton Person

who specialized in Genetics in the Department of Plant Science (the successor to Dr. Newton's old Department of Field Husbandry). Person had started the Ph.D. program at McGill University but transferred to Alberta to work with John Unrau, who had an excellent reputation in the field of Genetics. Person graduated in the fall of 1953. Solvenuk received his degree one year later, the second student to complete a Ph.D. program.

The committee set up in 1952 to draft formal regulations and a Calendar statement made use of the earlier work done and the experience of staff members who had graduated from a wide range of major universities in the United States and Britain and from Toronto and McGill. Over the years there have been some changes but, on the whole, the basic academic requirements have been maintained.

The report of the Committee was as follows:

1. The degree of Ph.D. may be awarded to a graduate of another university, who pursues a program of research and study in the University of Alberta, under the direction of a member of the faculty.
2. Residence requirements: For candidates having a Bachelor's degree, a minimum of three academic years of study and research shall be required, of which two academic years must be in residence at this University. For candidates having a Master's degree, two academic years of study and research in this University will normally be required.
3. The essential factor of the requirements is that the candidate shall demonstrate his ability to carry out research of a high calibre, the results of which shall constitute an advance in knowledge in the candidate's major field of study.
4. The program of each candidate shall be under the direction of a committee of not less than three members, appointed by the School of Graduate Studies. The chairman of the committee shall be the faculty member under whose direction the candidate is carrying out his major research, and at least one member shall be chosen from a different department. The committee shall recommend to the School of Graduate Studies the detailed requirements for the program of research and of course work in major and minor fields; and shall arrange for the necessary examinations and for adjudication of the thesis.
5. At least one year before he presents himself for the degree, a candidate shall pass a preliminary oral examination in subjects relevant to the

general field of his research. The examination shall be conducted by the supervising committee, with at least two other members of Faculty added to their number.

6. The candidate shall satisfy his committee that he possesses sufficient knowledge of French and German, in addition to English, to read accurately publications in these languages. In special circumstances another approved foreign language may be substituted for French or German. Before the candidate takes his preliminary examination, he shall be required to pass a foreign language test, consisting of translation of selected foreign literature in his field of research.
7. The results of the candidate's research shall be presented in a thesis satisfying the general requirements of the School of Graduate Studies as to form, and the material must be of sufficient merit to be acceptable for publication in a reputable scientific or literary journal. The thesis shall be approved by at least one external examiner, who shall be a recognized authority in the special field of the research.
8. After the thesis has been approved, the examining committee shall conduct a public oral examination of the candidate, based largely upon the thesis.

The council accepted the report and the proposed Calendar statement.

It is interesting to note that several of the council members took exception to various items in the proposed regulations. The most common form of these objections was usually something like: "But this is not the way it is done at McGill," or "This is not how this is handled at Wisconsin." There were adverse comparisons made with the regulations of at least six different universities. In discussion, it was pointed out that, obviously, everyone could not have his pet ideas accepted when they disagreed with those of others; that the committee had listened to all suggestions; and that the suggested regulations seemed adequate and the best that could be adopted. Finally, it was stated that "this isn't McGill and isn't Wisconsin or any other university, but the University of Alberta, and we have to develop regulations that fit our circumstances and guarantee quality in the degree."

At the present time, the regulations as spelled out in the Calendar for 1982-83 are essentially the same, although more specific. There are, however, some differences from the 1952 report, the more important being:

1. There is now no reference to "major" and "minor" fields. Actually,

in most departments there never was much stress put on this.

2. The “preliminary” examination has for many years been the “candidacy examination” and a student remains a “provisional candidate” until this exam is completed successfully.
3. The competency in languages other than English is now a departmental matter. There is no mandatory faculty requirement.
4. The requirement for an external examiner to read the thesis and attend the final exam is spelled out.

In 1955, there were five Ph.D.'s conferred, four of the students having completed their work in Plant Science and one in Biochemistry. After that several other departments graduated Ph.D. candidates, but up to and including Spring Convocation 1958, 10 of the 18 graduates were from the Department of Plant Science. It is probably appropriate that Dr. Newton's old department should have played such a dominant role in the early years of this program. The other departments graduating Ph.D.'s in the first six years and the numbers of graduates were: Biochemistry (three); Animal Science (two); and one each from Educational Administration, Physics and Soil Science. Thus 13 of the 18 were in agricultural disciplines and only one was not from a science department.

From 1958 on, there were much larger numbers graduated and a much wider range of departments involved. In 1959 there were 10 graduates from six departments; in 1960, six graduates from four departments; in 1961, 19 graduates from 11 departments; and in 1962, 27 graduates from 17 departments. In 1962 four of the departments graduating Ph.D.'s were in each of the faculties of Agriculture, Engineering and Science. There were three in the Faculty of Education and one in Medicine. The seventeenth was in the Faculty of Pharmacy, which was not departmentalized.

In the earliest years of the Ph.D. program each applicant was considered on his merit. The procedure involved an assessment not only of the potential student but also of the facilities of the department concerned and the qualifications of the staff member under whom the applicant wished to work. Once a department and a staff member had been approved, further applications for Ph.D. work in that department could be easily handled.

As the number of applicants increased and as the number of departments wishing to offer programs leading to the Ph.D. also increased, a formal procedure for the assessment of each department's competence to offer such programs was developed. Ad hoc committees of (usually) five members

each were established to deal with applications as they were submitted to the faculty. Each committee looked into all aspects of the departments, facilities and staff and made a recommendation to the council of the faculty. The recommendation could be for: (a) approval of Ph.D. programs in all areas of the department's work; (b) approval in limited areas; or (c) rejection of the request. Most departments did not request approval until they were clearly ready to offer programs, but a few were refused approval.

It is of interest that by 1959, when History was the first department in the Faculty of Arts to be approved to offer the Ph.D., five departments in Agriculture, five in Science, four in Education, four in Engineering, and three in Medicine and Pharmacy had already been approved and programs had been completed in nine departments. The first Ph.D.'s granted to graduates from Arts departments were in 1964 when one student in History and one in Psychology received degrees.

The restriction of admission to Ph.D. programs to students from outside the University of Alberta was causing problems in some departments and an increasing number of complaints were being received by the Faculty office. On February 21, 1958, a letter from Dr. Gunning of the Department of Chemistry was discussed by Council. As a result of that discussion and subsequent action by General Faculty Council, the regulation was changed to read as follows:

A student may be admitted as a provisional candidate for the degree of Doctor of Philosophy if he holds a bachelor's or a master's degree, or their equivalent, from an approved university other than the University of Alberta. Applications from University of Alberta graduates who have not obtained a degree from another university may be considered only on special recommendation to the Faculty of Graduate Studies by the department or division concerned. Admission is contingent upon recommendation by a department and upon the availability of suitable courses of study, library, laboratory and other facilities. Ph.D. applicants will be admitted as provisional candidates for at least one year and admission to candidacy will be approved only after the student has demonstrated competence.

Two departments were quick to take advantage of the "special recommendation" for students who had not received an outside degree. The

Department of Chemistry put forward the names of two students to be considered, and the Department of Educational Administration put forward the name of one. All three were admitted to Ph.D. programs starting in 1958.

Over the next three years several other similar cases were dealt with and in 1961 the restriction on Alberta graduates who had not done work elsewhere was removed completely.

On January 17, 1958, the question of offering programs in education departments leading to the degree of Doctor of Education (Ed.D.) was raised. A committee consisting of Max Wyman (Chairman), E. J. Greene, G. M. Dunlop and A. W. Reeves was requested to study the matter and make a recommendation to council. The committee reported on April 18, 1958. It had frequently been asked why there should be a second doctorate for education. The report of the committee is therefore recorded in full so that the claim that the Ed.D. is an inferior degree can be dispelled.

Report of the Committee on the Ed.D. Degree

The large increase in school populations has created a demand for trained personnel who can plan and administer educational systems, and their curricula. It seems clear that the training of such people should take into account the many aspects of the field of education and should not be confined to any single branch of this field. For this reason the degree, given for this type of training, must be considered as professional in nature and should be compared to similar degrees given in the fields of Medicine and Dentistry.

Although the usual requirements for the Ed.D. degree are similar to those for the Ph.D., we would like to point out certain important differences. The undergraduate honors program, in Arts and Science, is designed to allow a student to follow a concentrated course of study in a special field. Almost 80% of such programs are devoted to the study of the major and allied fields of interest. It is, therefore, reasonable that students with this type of training be allowed to proceed directly into the work for a Ph.D. degree. The undergraduate program for a B.Ed. is quite different. The latter program consists, almost on an equal basis, of courses designed to give competence in teaching. Students wishing to prepare for highly specialized positions in education must defer such training until graduate school. This fact seems to make it mandatory

that the Ed.D. program be restricted to students holding a Master's degree that is at least equivalent to an Alberta M.Ed. degree.

The committee feels that it is not desirable to have persons proceed directly into administrative type positions without some teaching experience. About the only way we could ensure such experience would be to incorporate a minimum number of years of teaching experience into the admission requirements for the Ed.D. program.

A major difference between the Ed.D. and Ph.D. programs is in the nature of the research contained in the thesis to be submitted. For purposes of discussion, we classify research in the following way.

1. Research on problems of the type for which there is no, a priori, knowledge that a solution to the problem exists.
2. Research on problems of the type for which existing knowledge and methods guarantee that a solution to the problem does exist.

A person seeking a cure for a certain type of disease has no way of knowing that a cure must exist. This type of research quite often involves the discovery of new theory and new technique. On the other hand, a person seeking to assess the relative merits of the Canadian and Russian educational systems has the knowledge that there exist adequate theories and methods by means of which such a comparison can be made. The relative importance of the two types of work need not concern us in the least. Doctoral degrees are consistently being given for both types of work. We merely note that the thesis required for the Ed.D. degree would almost always fall into our second classification. Some universities allow the thesis requirement to be fulfilled by a report or assessment of some important recent research. This policy does not seem to us to provide a student with adequate training in the methods and techniques of research work. Although we would allow students to make use of available methods and knowledge, we still should require that the thesis produce constructive results and conclusions which are of importance in the field of education. A mere description of the work of other people should not be acceptable.

The committee discussed several other details, such as the foreign language requirement, if an Ed.D. degree is to be given at Alberta. However we did not feel that exact requirements need be submitted until the Faculty of Graduate Studies accepts, in principle, the granting of the Ed.D. degree. For purposes of orientation we attach a sample program which we believe would warrant the awarding of such a degree.

In concluding, the committee recommends that the Faculty of Education be given the right to grant the Ed.D. degree.

The report was discussed at length by council and the motion that the Faculty of Graduate Studies be authorized to offer the program leading to the Ed.D. degree carried. Drs. Walker (Educational Foundations), Dunlop (Educational Psychology) and Reeves (Educational Administration) were appointed to develop the regulations for the degree and submit them to council. In due course these were submitted to the council and passed on by it to General Faculty Council where they were approved. The regulations include the statement that "several years teaching experience and an M.Ed. degree or its equivalent are prerequisites for admission."

The first Ed.D. was awarded at Fall Convocation 1960, to H. F. Sly in Educational Psychology, and the second in the fall of 1961 to L. M. Ready in Educational Administration. Nevertheless, the Ph.D. has continued to be much more popular as there were four Ph.D.'s in Educational Administration at 1961 Fall Convocation. Since the introduction of the Ed.D. only three have been awarded up to and including Fall Convocation 1982, although four departments list the degree as one of their offerings.

The Doctor of Music (D.Mus.) was introduced in 1976 and has not yet been granted. It is offered only in Performance and the regulations and requirements are geared to this restriction. The principal difference between the D.Mus. and the Ph.D. is in the "thesis" requirements. In lieu of a formal dissertation, D.Mus. candidates write a scholarly essay and present at least four public performances including a solo recital, a lecture recital, a second solo or lecture recital and a chamber music recital or solo performance with orchestra.

The final examination for the D.Mus. degree will include a defence of essay and performance.

One of the features of the original Ph.D. regulations which has applied to the other doctoral degrees and which has caused considerable discussion over the years is the requirement that an external examiner read the thesis and attend the final examination. There was general agreement that this was a desirable requirement when the degree was introduced, but several individuals and departments have argued that, as the experience of the Alberta staff developed, external examiners were no longer needed. Council has resisted all attempts to have the regulation altered because the advantages are believed to outweigh any possible disadvantages. The procedure results in

the bringing of many distinguished academics to the campus. In the first few years, many of these visitors expressed surprise at the quality of the Ph.D. programs at Alberta and one or two of them were so impressed that they persuaded one or more of their own students to do their Ph.D. work here.

Financial Assistance

Financial assistance for graduate students may take various forms: scholarships; fellowships; teaching assistantships; research assistantships; tuition scholarships and bursaries; intersession scholarships and bursaries and remission of fees as part of research and teaching assistantships.

Research assistantships were probably the first substantial source of financial assistance for graduate students in science departments at the University of Alberta. The money for these came from the National Research Council in the form of grants for research made to staff members and probably were not considered as primarily aiding graduate students. Nevertheless, quite a number of students were enabled to do graduate work as far back as the 1920s because of this assistance.

The National Research Council also granted a few scholarships in these early years and again students in science departments benefitted.

The first reference to open scholarships under the control of the Committee on Graduate Studies was the Robert Tegler Scholarship, first mentioned in the minutes of May 1, 1930. This, as already recorded (p. 14), is listed as "One scholarship at \$600 for one year to a graduate student in any faculty of the University who desires to prosecute research at the University, the award to be made on the recommendation of the Committee on Graduate Studies."

On January 12, 1931, President Wallace raised the question of seeking additional Tegler research scholarships. On April 8, 1931, consideration was given to awarding two Tegler scholarships. There were nine applications, five from students in the humanities and social sciences and four from students in natural sciences. While no reference to the question could be found in the deed of gift or in correspondence with The Tegler trustees, it was agreed that, other things being equal, the awards should be made to graduates of the University of Alberta. The first two awards were made to Reginald C. Hamilton in natural science and Mabel R. Conibear in humanities and social sciences.

By 1933, the committee heard that the Tegler Trust had found it necessary to reduce the funds available for scholarships from \$1,200 to \$600. It was suggested that, because two selections had been made (but not announced) the \$600 be divided but this was rejected. One award was made and the second selectee received the scholarship in 1934. This question of dividing scholarships came up several times and, as a matter of fact, scholarships were on occasion divided. In general, however, it was considered that the awards should be made as stipulated.

In 1934, the Board of Governors established two research scholarships each valued at \$600. They were awarded in 1934 for the first time and continued for many years. In that first year there were 31 applications, many of the applicants being fully deserving. This emphasized the urgent need for more assistance but the financial restrictions of the early 1930s prohibited expansion of the program.

In 1935, because a student who had been awarded a University Research Scholarship changed his research project as a result of working on a Geological Survey party during the summer, the committee only reluctantly allowed him to hold the scholarship. To prevent other similar changes without approval it was decided to insert in the Calendar a statement (as reported on p. 17) that "any registration, into which a change had been introduced—whether in course work or thesis topic would be invalidated unless the Committee had given its formal approval to the change." This meant that the invalidation would be accompanied by loss of any University award that had been made.

There was very little change in the general graduate assistance picture for many years. A few restricted awards were available, most of them small and, since they were restricted, they often were awarded to students who

would not have won in open competitions. Those who were most intimately concerned with awards wished to see as many as possible open to students in all fields of study and to graduates from other Universities as well as Alberta. This goal has never been completely achieved, but progress was made in the years after 1956.

In 1955, however, a program restricted to the Department of Educational Administration of the Faculty of Education was proposed by the faculty. It was to be a co-operative program under the aegis of the Canadian Education Association, the Kellogg Foundation and the University of Alberta under which educational administrators would receive financial assistance for graduate education. This program assisted many graduate students and had the effect of increasing interest in graduate work generally but specially in the departments in the Faculty of Education.

The original donation by the Kellogg Foundation was to be "seed money," with the University contributing an increasing percentage in each of the five years. This was done and the project was certainly a success. In the first year or so, most of the students were in the M.Ed. program but an increasing number of doctoral students took part as time went on. It is of interest that the University's present President, Myer Horowitz, obtained an M.Ed. through this program.

In 1957, the first graduate teaching fellowships were awarded, thanks to the generosity of the International Nickle Co., which donated what was then a large sum of money to the University. President Andrew Stewart felt very strongly that Ph.D. students in particular should have some teaching experience under guidance since many of them went directly from graduate work to teaching positions in colleges and universities. He established a special committee with A. G. McCalla as chairman to recommend to the Board of Governors how the money donated by the company could best be used.

The committee approached this question as part of the larger question of graduate student financial assistance. If the teaching assistants (as the committee first referred to the potential successful applicants) spent an appreciable proportion of their time in lecturing or conducting laboratories, the time to complete the degree program would certainly be extended. Therefore, the committee said, they should receive sufficient financial recompense for this extra time. The recommendations were finally put forward for two levels, \$2,400 a year for Master's students, and \$3,600 for Doctoral

students with at least one year's graduate credit. To say that the President and the Board were surprised at the levels suggested is putting it mildly, but eventually they approved them. They decided, however, that at these levels, they should be called Fellowships, not Assistantships. The first awards were made in 1957.

When the "Inco" Fellowship money was expended in 1962, the Council of the Faculty of Graduate Studies requested that the Board of Governors provide funds for continuing the program of teaching assistants or fellows. The Inco Fellowships had been so satisfactory to both the students and departments concerned that the demand had increased. It was recommended that departments should be entitled to include money for assistantships in their budgets. The request to the Board met with a most favorable reception and \$100,000 was provided in the budget for 1963 but departments were not authorized to budget for assistantships.

In an earlier section, brief mention was made of a proposal developed by the dean and Professor Max Wyman, for a series of scholarships and fellowships (p. 27). The "old" scholarship committee had approached this question from an individual department viewpoint, and of course departments said they "could use" one or more scholarships. It must be remembered that, at this time, the faculty had only three \$900 scholarships open to any student. The dean and Dr. Wyman (who soon became the chairman of the "new" scholarship committee) felt that the bulk of scholarships should be open and not assigned to any department.

The proposal developed in September, 1958, included:

1. Three Graduate Fellowships each at \$3,600 annually;
2. Ten Graduate Scholarships each at \$2,400 annually;
3. 25 Tuition Scholarships.

At the time the total value of this package was \$40,000.

Many members of the council of the faculty thought this was far too ambitious on two counts; too many were requested, and the values were too high. It was suggested that the total requested be cut in half. Fortunately this suggestion was defeated and it was agreed that the proposal should go to the Board of Governors.

The President was sympathetic but felt that the proposal in its entirety should be forwarded to the Government of Alberta (which was in the process of initiating a scholarship plan for schools and undergraduates in honor of the visit that year of Queen Elizabeth) with a strong

recommendation that the Graduate Scholarship/Fellowship proposal be incorporated into the Queen Elizabeth Scholarship scheme but called "The University of Alberta Scholarships and Fellowships."

Much to the delight of everyone concerned at the University, and to the surprise of many council members, the package was accepted as put forward with the exception of the name. The government decreed that these would be called "The Province of Alberta Scholarships and Fellowships." Needless to say, the University didn't quibble since these awards put our Faculty of Graduate Studies in a competitive position with other Canadian universities for graduate student support. These awards have formed a substantial part of the assistance to graduate students in the faculty ever since.

Although they were open to all graduate students, it was decided that preference should be given to students in the humanities and social sciences. In 1962, 57 graduate students in science departments had obtained NRC scholarships while no such awards were available in other fields.

This situation began to be corrected when the Canada Council was inaugurated, but it took some years before the number of scholarships in the humanities and social sciences reached a level even partially equal to the number available to science students. Despite the improvement in this situation, there have always been many fewer of these available. As a result, the original decision to give some preference for University awards to students in the humanities and social sciences tends to be continued.

Another type of financial support introduced at about this time was in the form of "Inter-session Bursaries." At first the value was \$800; the same as the summer support paid by the National Research Council through research grants. Such support enabled graduate students to continue their studies, particularly research, through the months between the end of one academic session in May and the start of the next in September.

While not in any way under the control of the University, the Commonwealth Scholarship plan introduced in 1959 through the Federal Department of External Affairs, brought some very good graduates from all parts of the Commonwealth to Edmonton. Canada provided a total of 250 scholarships and since most awards were for programs that took two or more years to complete, about 100-125 were awarded annually. While most of the awards went to graduate students, a number of undergraduates were accepted each year, particularly from countries with no, or limited, university facilities. The students nominated by their countries could state a preference as to the

university they wanted to attend. All countries making nominations for Canadian scholarships were requested to send about twice the number of nominations as there were scholarships to be awarded. This made it possible for the Canadian committee to select the students who were to get awards and insured that only those with the best potential were successful.

Most of the committee members were academics representing universities across the country and the major disciplines. The University of Alberta has been represented by one member of the committee since the inception of the program.

In the early years of the plan, few graduate students named the University of Alberta as a preference but the committee frequently sent the scholarship holder to a university not preferred because it was convinced that a better program could be obtained. This was frequently the situation for students seeking Master's degrees because some relatively poorly-known Canadian universities offered excellent programs in special fields.

After the first few years of the plan more applicants listed Alberta as a choice, particularly for Ph.D. programs. By 1962, this University had the fourth largest graduate program in Canada after Toronto, McGill and British Columbia. The changes which had occurred at the University of Alberta resulted in increasing numbers of Commonwealth Scholarship holders coming here. Since the inception of the program in 1960 (the first year awards were held) there have been 142 graduate students who held their scholarships at Alberta.

A few small specialized awards had been introduced before the faculty was established in 1957 but only after that date were there substantial increases. The Province of Alberta Scholarships and Fellowships were followed by the introduction of other awards.

In 1960, the two University of Alberta scholarships were discontinued and replaced by the University of Alberta Graduate Fellowship, designed to be the top award of the faculty. In 1963, the Harold Hayward Parlee Memorial Scholarship was first awarded. In 1964 Dissertation Fellowships, open to Ph.D. students in their final year, were introduced, and in 1967 the Izaak Walton Killam Memorial Scholarships became available through the very generous financing made possible from the estate of I. W. Killam's widow.

All of the above scholarships and fellowships are open to students in all disciplines and the Killam, University Graduate, Dissertation and Parlee

awards are open to students of all nationalities. This largely guarantees that the best graduate students get the best awards.

Over the last 20 years or so there have been some scholarships made available by donations from industries, the City of Edmonton and individuals. Usually there is only one in each category and it is restricted to a particular discipline. In total they make up about five percent or less of the award money.

The scholarships awarded to individual science students by the National Research Council of Canada and to students in humanities and social sciences by the Canada Council have already been referred to. Up to 1957 the maximum number of NRC scholarships awarded to students at the University of Alberta was 20. This jumped to 57 in 1962 and 92 for 1982-83. At present the awards are made, not by the National Research Council but by the Natural Sciences and Engineering Research Council (NSERC). The numbers of awards to students in the humanities and social sciences, originally made by the Canada Council and now by the Social Sciences and Humanities Research Council, have been much lower and in 1982-83 total 25.

The contrast in values in the early years and at present is startling, reflecting the inflation that has taken place during the last 25 years or so. Whereas in 1957, the largest award was \$900 a year, and the highest value of new awards before 1967 was \$3,600 a year, there are now (1982-83) 29 awards valued at \$11,000 a year and 110 at \$7,200 and over. A complete list is given in Tables III and IV, together with the year of first award and the initial

Table III
Open Graduate Scholarships and Fellowships
Administered through the Student Awards Office

<i>Name</i>	<i>Date Started</i>	<i>Present Number</i>	<i>Individual Value</i>	<i>Total Value</i>
University of Alberta Graduate Fellowship	1960 @ \$3,600	1	\$11,000	\$ 11,000
Dissertation Fellowships	1964 @ \$3,600	20	\$ 8,500	\$170,000
Izaak Walton Killam Memorial Scholarships (8 awarded each year, renewable twice)	1967 @ \$4,500	24	\$11,000	\$264,000
Province of Alberta Graduate Scholarships	1959 @ \$2,200 or \$2,600	40	\$ 7,200	\$288,000
Province of Alberta Graduate Fellowships	1959 @ \$3,600	20	\$ 8,400	\$168,000
Harold Hayward Parlee Memorial Scholarship	1963 @ \$3,600	1	\$ 3,600	\$ 3,600

Table IV
Graduate Scholarships, etc, in Restricted Fields
(Current value in excess of \$1,000)

<i>Name</i>	<i>Date Started</i>	<i>Number</i>	<i>Individual Value</i>	<i>Total Value</i>
Alberta Egg & Fowl Marketing Board Scholarship	1981	1	\$ 2,500	\$ 2,500
Alberta Sugar Factories Limited Scholarship	1947 @ \$ 500	1	\$ 500	\$ 500
AOSTRA Predoctoral Scholarships in Oil Sands Development	About 1976 @ \$6,500	4	\$11,000	\$44,000
City of Edmonton Graduate Fellowship (Research topics of municipal interest)	1979 @ \$6,000	1	\$ 6,600	\$ 6,600
Alberta Research Council Karl A. Clark Memorial Scholarship (Research topics of interest to Council)	1970 @ \$3,600	1	\$10,500	\$10,500
Delta Delta Delta Alumni Fellowship	1961 @ \$1,000	1	\$ 1,500	\$ 1,500
Luscar Limited Graduate Scholarship in Mining Engineering	1976 @ \$6,000	1	\$10,500	\$10,500
Elizabeth Russell MacEachran Scholarship in Home Economics	1973 @ \$2,000	1	\$ 7,500	\$ 7,500
Labatts MBA Fellow Award	1981 @ \$5,000	1	\$ 5,000	\$ 5,000
William Rea Scholarship in Creative Arts	1959 @ \$1,000	2	\$ 2,500	\$ 5,000
Sarah Rebecca Reed Scholarship in Library Science	1979 @ \$ 500	1	\$ 1,600	\$ 1,600
Flore Shaw Graduate Scholarship in Music	1973 @ \$1,200	1	\$ 4,000	\$ 4,000
Harry Edward Sim Memorial Scholarship in Civil Engineering	1981 @ \$1,000	3	\$ 1,000	\$ 3,000
J. Macgregor Smith Graduate Scholarship in Agricultural Engineering	1967 @ \$3,600	1	\$ 6,000	\$ 6,000
Max & Marjorie Ward Scholarship in Wildlife and Entomology of the North	1974 @ \$ 500	1	\$ 1,000	\$ 1,000
Warner-Lambert Parke-Davis Pharmacy Research Fellowship	1963 @ \$1,500	1	\$ 2,000	\$ 2,000
Samuel F. Woloshyn Memorial Award (Now St. John's Award)	1971 @ \$1,000	1	\$ 1,000	\$ 1,000
Xerox Canada Inc. Fellowship in Business Administration	1969 @ \$2,000	1	\$ 2,000	\$ 2,000

value. The total of just over one million dollars administered by the Student Awards office of the University in 1982-83 is a reflection of the enormous growth in numbers and strength of support for graduate programs since 1957, even when the effects of inflation are taken into consideration.

Despite the apparently high value of some of these awards, it is now clear (1983) that the University is falling behind some other Canadian universities in the value of its best scholarships and fellowships. Some awards as high as \$15,000 annually are available to doctoral students at some Canadian universities. The inevitable result of this is that some very good students, who would otherwise come to Alberta, opt to go where the higher awards are available. It seems certain that adjustments are required to ensure that the University of Alberta continues to hold a leading position in graduate education in Canada.

An almost equal amount of support is through the NSERC awards, the value of which for 1982-83 is \$960,750. The Social Sciences and Humanities Research Council awards add \$236,520 to this total.

Two other major sources of graduate support are available. Many graduate students get financial support through graduate teaching assistantships. The program initiated on a modest basis in 1957 with the International Nickel Teaching Fellowships was, as already indicated, considered to be very successful. The University's first provision of \$100,000 has been greatly exceeded in later years. It is now administered through the undergraduate faculties and provides teaching assistance in many departments. While the granting of these assistantships is not now controlled by the Faculty of Graduate Studies, they provide a very sizable degree of financial support for graduate students.

Research Assistantships are under the control of the Faculty of Graduate Studies and money for them is provided in its budget. For 1982-83 the amount of money for these and for Intersession Bursaries combined is nearly \$2,500,000.

For some years students holding Teaching and Research Assistantships were granted remission of fees. The value of this remission to graduate students in 1971-72 was over \$500,000. With changes in income tax regulations, Teaching and Research Assistantships were divided into two components—one a bursary and the other a stipend. Thus the \$2,500,000 available for Research Assistantships includes a component which replaces the remission of fees.

The calendar lists a considerable number of scholarships, fellowships and bursaries which are awarded by other agencies. It also lists a variety of financial aids provided by the Government of Alberta in the form of

scholarships, grants and loans. The total amount of money represented by these various forms of assistance is variable but very substantial.

All in all, it can be confidently stated that the financial support of graduate students has been among the best in Canada. Assistance of all types adds up to figures undreamed of even when the very determined effort to improve the poor situation that existed in 1957 was begun. Nevertheless, another determined effort must be made to restore and maintain a position of equality or even leadership among Canadian graduate schools.

Graduate Studies at Calgary

When the University of Alberta took over all teacher training in the province in the early 1940s, the Normal School in Calgary became the Calgary Branch of the University of Alberta. In 1964 it became the University of Alberta, Calgary, and in 1966, the University of Calgary. Until 1964, the graduate work at Calgary was under the direct control of the Faculty of Graduate Studies at Edmonton.

During much of this period there were no graduate programs at Calgary and none were requested. As the work expanded, however, there developed a demand that such programs be approved. It was claimed, quite justifiably in some cases, that staff members had competence to supervise graduate work, but library and research facilities were frequently inadequate. As full undergraduate degree programs were approved, the demand for graduate students to act as laboratory assistants was very strong.

On October 16, 1959, Calgary put a formal request before the Graduate Faculty Council. This request read:

The Dean of Graduate Studies be asked to ensure that it is explicitly stated in the appropriate sections of the calendar that the residence requirements for obtaining degrees beyond the bachelor's degree may be met in Calgary as well as in Edmonton since both are at present centres of the same University.

This request was thoroughly discussed by council and rejected. Instead, it was agreed that the Calendar would carry the following statement under the general rules for the Master's degree:

In specific fields and under special circumstances, residence may be met in Calgary.

Needless to say, this did not satisfy many Calgary staff members, but a few students were admitted to Master's programs, largely in the science departments.

As the work at Calgary expanded, two members of the Calgary staff were appointed to the Council of the Faculty of Graduate Studies. It is indicative of the emphasis on science graduate studies that these members were from the Departments of Physics and Chemistry. They continued on the council until Calgary gained control of its own graduate work.

The next request was that Ph.D. programs be offered at Calgary. The proposal for a few of the programs requested had merit but it was clear to the council that many of them were unreasonable. A committee of council was established in 1963 to consider the whole question, visit Calgary, discuss the submission with the Calgary staff and make recommendations. The committee was made up of senior members of the Edmonton staff, all of whom had first hand experience with Ph.D. programs and each of whom represented an area in which Ph.D. programs had been proposed.

The committee was favorably impressed with the presentations of a very few departments and was not at all impressed with others. As a result of the committee's report to the faculty council, Ph.D. programs were approved for Chemistry and some aspects of Physics. Many Calgary staff members were disappointed by the limited approval given.

In October 1962, it was suggested that a Committee on Graduate Studies be established at Calgary. This committee would be responsible to the Faculty of Graduate Studies. The suggestion was adopted and a committee of ten, with the dean of the faculty as chairman, was appointed as a standing committee of Council. It functioned as long as the Calgary programs were the responsibility of the faculty.

In 1964, approval was given for the Ph.D. in Mathematics and many departments were approved to offer the Master's degree.

Late in 1964, the University of Alberta, Calgary, got its own General Faculty Council and the authority for graduate work was transferred. With the complete separation of the two campuses in 1966, all direct and indirect control over Calgary programs ceased.

Graduate Students' Association

In early 1956, some members of the Council of the School of Graduate Studies suggested that graduate students should be encouraged to form a "club," and that the Board of Governors be requested to hold a tea for graduate students at which this suggestion could be discussed. Vice-President Johns replied on behalf of the Board, and his letter was considered at the March 16, 1956, meeting of the Council. He stated that the Board considered that the initiative for such an organization should come from the graduate students rather than from staff members or the Council of the School of Graduate Studies. Many Council members agreed with this opinion.

At the May 5, 1956, meeting of Council it was agreed that the Director should appoint a committee to prepare a questionnaire to be completed by graduate students at fall registration. There is no record that such a questionnaire was prepared, and the December 18, 1956, minutes record that the matter was to be left in the hands of the Director.

By the fall of 1958, however, a small group of graduate students had prepared a brief questionnaire which was completed at the time of registration. A majority favored the formation of a graduate students' organization, many indicating that they wished to get together so that students from different parts of the campus could meet and discuss mutual problems.

A four-student committee called a meeting for December 2, 1958. They reported that 91 students had indicated an interest in forming an organization. Council members were invited to attend this meeting, if they wished. They were assured that the students would welcome them. This meeting agreed to establish a graduate students' organization, and set up a steering committee to draft a constitution and by-laws. At the January 16, 1959, meeting of Council it was reported that the constitution had been prepared and would be considered at a general meeting of graduate students later that month. Again, council members were invited to attend.

On April 17, 1959, the Graduate Students' Association requested approval of its Constitution and By-laws. The Council of the Faculty of Graduate Studies recommended to the Board of Governors "that the Graduate Students' Association be recognized as an official University organization and that the Constitution and By-laws be accepted subject to ratification by the Committee on Student Affairs." The Board approved and the Association was launched with Gordon Williams, a Ph.D. student in Geology, as President.

The organization has flourished since its inception. There have been some disputes with the Students' Union and some problems but, in general, these have been overcome.

Of much greater significance, however, is the part the Association has played in university affairs. At the present time it is represented by membership on the Council of the Faculty of Graduate Studies, the General Faculties Council and the Board of Governors. Many of the students who have represented the Association on these bodies have made very significant contributions to their deliberations.

Canadian Association of Graduate Schools

The rapid growth of graduate studies at Alberta was by no means unique. Other Canadian universities also expanded their graduate programs and it became possible for Canadian students to obtain Ph.D. level education in most academic disciplines.

In June 1962, an informal meeting of the deans of Faculties of Graduate Studies at most Canadian universities was held at McMaster University. This meeting resulted from discussions among the deans at Queen's University, the University of British Columbia and the University of Alberta, and their conviction that, with the rapidly increasing emphasis on graduate studies at many Canadian universities, it would be advantageous to have an organization for the exchange of information and views.

The McMaster meeting was favorably disposed but decided that the question should be discussed at individual universities, and a formal meeting held in the fall to consider the results of the discussions and the action, if any, to be taken. This meeting was held at Carleton University, Ottawa, on November 30 and December 1, 1962. The nineteen universities represented included Alberta, Assumption, British Columbia, Carleton, Dalhousie, Guelph, Laval, Manitoba, McGill, McMaster, Memorial, Montreal, New Brunswick, Nova Scotia Technical, Ottawa, Queen's, Saskatchewan, St. Francis Xavier, and Toronto. The meeting was also attended by three

officials of the National Conference of Canadian Universities and Colleges who were very much in favor of the establishment of an organization, preferably under the auspices of the NCCUC.

There was considerable general and detailed discussion which led to the following decisions:

1. That we establish the Canadian Association of Deans and Directors of Graduate Studies (CADDGS), (L'Association Canadienne des doyens et directeurs de l'enseignement Universitaire superior). (It should be noted here that it was soon realized that a shorter name was desirable and at the first regular meeting of the Association, the name 'Canadian Association of Graduate Schools' (CAGS) was adopted.)
2. All deans, associate deans and directors of graduate studies in recognized Canadian universities be eligible for membership.
3. It was agreed that the following aims constituted the Association's terms of reference:
 - (1) To exchange information, experience and views regarding
 - (a) the initiation, organization and administration of graduate studies;
 - (b) the admission, support and supervision of students;
 - (c) the structure of degree programmes;
 - (d) the promotion of research;
 - (e) other matters of concern to directors of graduate studies; and
 - (2) generally to promote the improvement of graduate education in Canadian universities.
4. The offer of the NCCUC to put its secretarial, research and information sources at the disposal of the newly formed Association is accepted but, the Association is to remain autonomous.
5. The first regular meeting of the new Association should be held at Laval University in October 1963 at the time of the meetings of the National Conference of Canadian Universities and Colleges, the predecessor of the Association of Universities and Colleges of Canada.

It is worth noting that the decision for the new association to remain autonomous was influenced greatly by the emphatic assertion of one or two deans that their universities would not join if the NCCUC were to be considered as its parent body. They claimed that earlier experience had shown that under such an arrangement initiative was likely to be stifled. It

must be said, however, that the new association had nothing but help from the NCCUC and that co-operation has been good.

The first executive of the association included J. M. R. Beveridge (Queen's), L. P. Dugal (Ottawa), J. Risi (Laval), and A. G. McCalla (Alberta), Chairman (later President).

The association has flourished from the start and has played an important part in the development of graduate studies on a strictly informal basis. It is active at present.

Summary

In the early years of its existence, the University of Alberta concentrated on developing sound undergraduate programs. Graduate work at the master's level was instituted in these early years, but the records show clearly that such work was considered incidental to the main thrust of the University.

This situation continued until about 1925, when serious efforts were made to regulate the terms under which Master's degrees would be awarded. Despite these developments, and the introduction of Ph.D. programs on a limited basis in 1946, graduate studies played a minor part in the University's work until 1957. At that time, the Board of Governors' decision to expand graduate work, and the establishment of the Faculty of Graduate Studies resulted in very rapid development. This was further stimulated by the introduction of better scholarships and fellowships and by the introduction of teaching and research assistantships.

The rapid increase in the numbers of students and in the number of departments offering graduate work, particularly at the Ph.D. level, continued until 1970, then levelled off. There is no question that, by that date, the University of Alberta had become one of the four leaders among Canadian universities in graduate studies. It also had one of the best programs for financial assistance to students. This combination of offerings and

financial support has attracted students from all parts of Canada and from a large number of foreign countries.

Up until the 1950s, Canadian students in many disciplines had obtained their advanced education in the United States or Europe because there was little opportunity for such education in Canada. The developments at Canadian universities made it possible for a much larger number to complete their education in Canada. Furthermore, these developments also made it possible for Canadian universities to repay some of the debt they owed to some countries for providing Canadian students with advanced education. The University of Alberta can take pride in the part it has played in this work.

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McCalla, Arthur G.

The development of graduate
studies at the University of
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